

ASSESS FINANCIAL CONSIDERATIONS

Identify funding sources dedicated to transportation and the costs of constructing, maintaining and operating the transportation system over the period of the long range plan.

INTRODUCTION

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was the first federal transportation act to require that long range transportation plans developed by metropolitan planning organizations include a financial plan to demonstrate how recommended highway and transit facility improvements would be funded. ISTEA also required that long range plans be "fiscally constrained," meaning that only those new facilities and recommended improvements which could be funded using existing and reasonably anticipated revenue streams could be included in MPO long range transportation plans. The Transportation Equity Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and the Moving Ahead for Progress in the 21st Century Act (MAP-21), the most current federal transportation legislation, also requires that a financial plan be part of a region's overall long range transportation plan. The purpose of this requirement is to ensure that planned improvements included in the RTP can be funded and that air quality benefits assumed for the implementation of the plan are realistic. These realistic estimates of emissions reductions are needed for the air quality conformity analysis required by MAP-21 and the <u>Clean Air Act</u> amendments of 1991.

Federal guidelines on preparing financial plans state: "The financial plan should compare the annual revenue from existing and proposed funding sources that are dedicated to transportation uses, and the annual costs of constructing, maintaining and operating the transportation system over the period of the long range plan. The annual revenue by existing revenue source (at the local, state, and federal level) dedicated to transportation improvements should be calculated and any shortfalls identified. Proposed new revenues should cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections should be based on the best available data and trends. This requirement does not preclude MPO's and states from also developing unconstrained 'needs' plans."

Finally, MAP-21 allows for unfunded highway and transit projects to be included as part of a regional long range transportation plan. These unfunded projects are those which cannot be included in a fiscally constrained long range plan, but which would be included if a viable future funding sources could be identified. The Wasatch Front's 2015 – 2040 RTP includes a number of unfunded (illustrative) projects that are not covered by current funding sources identified in this financial plan. However, if prospective regional funding sources can be identified to pay for these projects in the future, they will then be included as part of future regional transportation plans.

Potential funding sources are summarized in this chapter and reasonable estimates of future revenues that can be derived from these sources are made for the 2015 – 2040 RTP. Estimates are made of the amounts required to meet the projected needs of the Regional Transportation Plan through the year 2040. Cost estimates not only include the amount of funding that will be required to pay for each capacity improvement project, but also the operation, maintenance, and preservation of the existing transportation network. Appendix G entitled, "Revenue And Cost Assumptions" contains more detailed information that was used to determine the resources and expenditures used in the development of the 2015 – 2040 RTP financial plan.

OVERVIEW OF REVENUE ASSUMPTIONS

Early in the preparation of the 2015 – 2040 RTP, the Wasatch Front Regional Council, UDOT, UTA, the Mountainland Association of Governments (MAG), the Dixie Metropolitan Planning Organization (Dixie MPO), the Cache Metropolitan Planning Organization (CMPO), and the FHWA formed a Financial Subcommittee to the Utah's Unified Transportation Plan Policy Committee. The Subcommittee's role was to developed estimates of potential revenues based on projected sources for transportation improvements through the year 2040. Included in these revenue estimates are federal, state



and local sources authorized for both highway and transit improvements. Assumptions were made concerning revenue growth and new or increased sources of funds. The projections and assumptions agreed upon by all affect groups are discussed in the balance of this section. These assumptions were organized in a statewide financial model and used by each agency. A more detailed description of potential federal, state, and local revenue sources for the Wasatch Front Regional Transportation Plan: 2015 – 2040 has been provided in Appendix H entitled, "Potential Federal, State, And Local Revenue Sources."

HIGHWAY REVENUE SOURCES

The WFRC assumed that federal, state, and local government revenues will, in fact, be available for the recommended highway improvements found in the Wasatch Front Regional Transportation Plan: 2015 – 2040. These revenues were estimated for the years 2015 through 2040. Separate estimates have been made for those funds that will be available to UDOT and other funding amounts that will be available for local governments.

Revenue sources for UDOT estimates include both federal and state funds. The WFRC staff assumed that federal funds would grow by approximately 1.5 percent each year. Based on historic trends, the staff also assumed that motor fuel tax revenues would increase at 1.5 percent for the first four years and then at 1.71 percent for each year thereafter. Special fuel tax revenues are expected to increase at 1.5 percent for the first four years and then at 4.32 percent beginning in the fifth year. In addition, the WFRC staff assumed that a five cent per gallon increase in the motor and special fuel tax will be adopted by the Utah State Legislature in 2015, 2025, and 2035. Finally, it is assumed that state vehicle registration revenues will increase by \$10.00 in 2018, 2028, and 2038.

The Transportation Investment Fund (TIF) is currently supported with a portion of Utah State auto-related sales tax up to 17 percent. The TIF is also funded using a 1/64 sales tax, a portion of the Utah State vehicle registration fee, part of the state fuel tax, and general fund monies. The TIF was created and funded by the Utah State Legislature in 2005. In 2010, the TIF was combined with the Centennial Highway Fund (CHF). The Centennial Highway Fund was enacted in 1997 and funded, in part, with appropriations from state and federal funds set aside for use in building capacity-increasing transportation projects. The current TIF bonds are projected to be paid

off by 2029.

The main sources of assumed revenue available for local roads of regionally significance projects are:

- Federal funds from the Salt Lake City West Valley City Urbanized Area and Ogden – Layton Urbanized Area <u>Surface Transportation Programs</u> (STP) and the Congestion Mitigation / Air Quality Programs (CMAQ):
- Class B and C Funds allocated to municipalities and counties from state highway user revenues;
- Local option sales taxes in Salt Lake and Weber Counties;
- Local option vehicle registration fees for corridor preservation in Salt Lake, Davis and Weber Counties;
- Allocations from the general funds of local governments;
- Future increases in local option sales taxes for transportation projects in Salt Lake, Davis, Weber, and Box Elder Counties in 2017;
- Future vehicle registration fees in Salt Lake, Davis. and Weber Counties in 2020, 2030, and 2040; and
- Future adoptions, county by county, of a local option fuel taxes in 2027.

STATEWIDE HIGHWAY REVENUES

The Utah's Unified Plan Finance Subcommittee, in coordination with UDOT, developed estimates of projected revenues that will be available to UDOT between 2015 and 2040. These existing and new revenues come from federal and state transportation funds, the TIF, and as presented below.

Federal Revenue

The Intermodal Surface Transportation Efficiency Act (ISTEA), adopted in 1991, established written guidelines for the use of federal funds for highway improvements sponsored by UDOT. TEA-21, enacted in 1998, SAFETEA-LU, enacted in 2005, and MAP-21, the current federal transportation bill, continued these programs at higher funding levels. These programs include the Interstate Maintenance, National Highway System, Any Area Surface Transportation, STP Safety and Enhancement, and Bridge Replacement programs. A modest growth rate of 1.5 percent per year for each program was assumed between 2015 and 2040. The WFRC urbanized area is expected to receive approximately \$1,680,000,000 in current dollars for UDOT Federal expenditures related to preservation and other non-capacity programs.



State Funds

Revenues provided by the State of Utah for transportation are primarily generated through highway user fees. These fees include motor fuel tax, special fuel tax, motor vehicle registration, proportional registration, temporary permits, special transportation permits, highway use permits, motor vehicle control fees, and miscellaneous fees. In the past, the Utah State Legislature has also programmed state general funds to support UDOT projects. To project future revenues, historical growth rates of 4.04 percent were used for each of the sources listed above, with the exception of 1.71 percent for motor fuel tax and 4.32 percent for special fuel tax after 2019. In addition to State revenues mentioned above, the Utah Department of Transportation collects additional funding, including sales and aviation fuel taxes, a 1/16 percent sales tax, a 0.025 percent sales tax, other sales and aviation fuel taxes, federal contracts and grants, Department collections, investment income, and miscellaneous. To project future revenues, historical growth rates of 5 percent for the first three sources were used, 1.5 percent for the federal contracts and grants, and 5.64 percent for UDOT collections. From these various sources, the State will generate approximately \$10,413,000,000, in current dollars, between 2015 and 2040 for use in the WFRC urbanized areas. It should be noted that these funds will be used for preservation, capacity, operations, and a variety of other uses.

State revenue projections also assume future increases in State of Utah fuel and special fuel tax. The latest increase was five cents per gallon, approved in 1997, dedicated to the CHF program and carried over to the TIF program. In 2005, the State Legislature approved the use of approximately half of the State's sales tax revenue associated with auto-related sales, approximately 8.3 percent of the total, for highways. These funds initially were to be used to retire the CHF bonds. In 2011, the State Legislature, through Senate Bill 229, allowed for portions of increases in the State sales tax revenues to be used in the TIF program. Senate Bill 229 capped the amount of sales tax revenue collected to correlate to the proportion associated with auto-related purchases at 17 percent. Sales tax revenues related to the Critical Highway Needs Fund (CHNF) have also been rolled into the TIF – one of these additions was a set amount and the other was fixed at 0.025 percent. A growth rate of about four percent per year until 2018, and then five percent per year until 2040, was used for sales tax related revenue sources in the TIF program. The Finance Subcommittee to the Utah's Unified Transportation Plan Policy Committee assumed that after the TIF bonds are paid for, the auto-related and general funds dedicated

to that purpose will be available for future TIF programs. These funds will generate approximately \$6,434,000,000 statewide, in current dollars, from 2015 to 2040 for future transportation projects after TIF expenditures in the WFRC urbanized areas.

During the development of the 2015 – 2040 RTP, current trends indicate that it is reasonable to expect the Utah State Legislature to continue to raise revenues for highways every five to ten years. The 2015 – 2040 RTP assumes the equivalent of a five cents per gallon of gasoline and special fuel tax increase in the years 2015, 2025, and in 2035. An increase in vehicle registration fee is assumed in 2018, 2028, and 2038. These new revenues are estimated to generate approximately \$1,014,000,000 statewide in current dollars for the WFRC urbanized areas.

On March 12, 2015, the Utah State Legislature passed House Bill 362, entitled "Transportation Infrastructure Funding." Governor Gary Herbert signed it into law on March 27th, Representative Johnny Anderson, Chair of the House Transportation Committee, sponsored the bill and Senator Al Jackson. Chair of the Senate Transportation Committee, served as the floor sponsor. The law has two main provisions affecting transportation funding.

The first provision is a reform of the fuel tax from 24.5 cents per gallon to a 12 percent tax on motor and special (diesel) fuels. The conversion to a percentage tax will be effective January 1, 2016 and equates to an immediate 4.9 cents per gallon increase in the state fuel tax, with potential growth overtime as the price of fuel rises. To limit price volatility the rate the tax is calculated has a floor set at \$2.45 and a ceiling set at \$3.33 on the wholesale price of fuel. This rate is recalculated annually based on the three year average of the wholesale price of fuel.

The second provision is a .25% general sales tax for transportation. The law authorizes counties to enact the sales tax after voter approval. If approved by voters. 0.10% of the funds would be allocated directly to the transit provider, 0.10% to cities, towns and unincorporated county areas, and 0.05% to the county. In areas without transit service, 0.10% of the funds would be allocated to cities, towns and unincorporated county areas and 0.15% to the county. The funds would be distributed via a 50/50 point of sale/population formula among all of the counties who enact the tax.

Not all of the highway user revenues are available to UDOT. These expenditures, transfers and diversions are



TABLE 5 - 1 PROJECTED UDOT HIGHWAY REVENUE WFRC URBANIZED AREA

SOURCE	AMOUNT (In current dollars)
Federal Revenue	
UDOT Federal Expenditures Related to Preservation and other non-capacity projects	\$1,680,000,000
State Revenue	
Highway User Funds	\$10,413,000,000
Transportation Investment Fund (TIF)	\$6,434,000,000
New Revenue	\$1,014,000,000
Total Statewide Revenue Available	\$19,541,000,000

discussed in another section of this document. Table 5-1 summarizes the amount of statewide highway revenue projected through the year 2040.

For financial planning purposes, the Utah's Unified Plan Finance Subcommittee has allocated state revenues for capacity projects by population between MPOs and the rural state. The population within the Salt Lake City – West Valley City and Ogden – Layton Urbanized Areas is currently 57.3 percent of the State's population but declines to 51.4 percent by 2040.

LOCAL HIGHWAY REVENUES

The main sources of local revenues for transportation projects are: (1) federal funds allocated for the Salt Lake City – West Valley City Urbanized Area and Ogden – Layton Urbanized Area Surface Transportation Program and the Congestion Mitigation / Air Quality Program; (2) Class B and C funds from Utah State highway user revenues designated for counties and municipalities; (3) local entity general funds; and (4) local option taxes. The following section describes the various funds that are available to local municipalities within the Wasatch Front Region.

Federal Funds

The Intermodal Surface Transportation Efficiency Act of 1991 established new or reformulated federal spending programs which the WFRC administers to fund highway improvements in urban areas. The <u>Transportation</u> Equity Act for the 21st Century, SAFETEA-LU, and MAP-21 continued these programs at higher funding levels. These programs are the Salt Lake City – West Valley City Urbanized Area and Ogden – Layton Urbanized Area

Surface Transportation Programs (STP) and Congestion Mitigation / Air Quality Programs (CMAQ). As with the other federal program revenues, a modest growth rate of 1.5 percent per year for each program was assumed for the period between 2015 and 2040. These funds can be used for projects on the state highway system, as well as on local streets. Based on past trends, the 2015 – 2040 RTP assumes that approximately 60 percent of STP and CMAQ funds will be used for state facilities and the other 40 percent will be used for locally owned facilities of regional significance. The STP funds, based on historical trends, assumed 43 percent will be used for capacity improvements, 28 percent for preservation costs, and the remaining 29 percent for operations and miscellaneous projects. The CMAQ funding, based on historical trends, assumes all the funding will be used for operations and other types of projects. Approximately \$449,000,000 is projected to be available for STP and approximately \$144,000,000 is projected to be available for CMAQ between 2015 and 2040 for the WFRC urban area, in current dollars.

Class B And C Funds

<u>Class B and C road funds</u> are allocated from the State's highway user fees revenue. Currently, 70 percent of the highway user fees are directed to UDOT and 30 percent are diverted to the Class B and C funds. These monies are then divided between counties and municipalities based on a formula that uses population and road miles for calculations. The distribution of Class B and C funds, based on a local survey, assumed 15 percent would be used for capacity improvements, 70 percent for system preservation, and the remaining 15 percent for operations and other types of projects. Although the allocation formula may change in the future, the current percentage was used for the projection of funding from



this category for the implementation of the 2015 - 2040RTP. Approximately \$1,208,000,000, in current dollars, is projected to be generated between 2015 and 2040 for the WFRC urban area.

General Funds

Counties and municipalities along the Wasatch Front program a significant amount of their general funds for local road maintenance and improvements. Many of these roads are part of the Region's highway system. Current and past general fund spending on regionally significant roadways was examined to project future revenues. Based on the information provided by the Utah League of Cities and Towns, local governments in the Wasatch Front urbanized area are projected to spend about \$88,456,000 on highway improvements in 2015. These local expenditures are projected to grow by 0.73 percent per year through 2040, for a total of approximately \$1,842,000,000, in current dollars.

Local Option Funds

As approved by voters in Salt Lake County in November 2000, UDOT was to have received a one-quarter of the one-quarter cent (0.625 percent) share of the transit

sales tax in Salt Lake County in perpetuity for the construction of highways. The State Legislature made clear that UDOT was not to use this increase in revenue to supplant funds that would have otherwise been spent in Salt Lake County. The one-sixteenth of a cent (.0625 percent) local option sales tax was designated for State highway projects in Salt Lake County by later action of the State Legislature. The WFRC is estimating that this sales tax levy will generate approximately \$410,000,000 between 2015 and 2040, in current dollars. The State Legislature has authorized the use of local option sales taxes for both highways and transit. Based on the Salt Lake County Council of Governments (COG) ranking and rating process for the third quarter sales tax revenue, UDOT will receive a portion of the one-quarter cent sales tax approved in Salt Lake County in 2006. Approximately a 20 percent of the one-quarter percent (.05 percent) sales tax is projected to be used for roadways from this local option sales tax, this is projected to generate approximately \$328,000,000 by 2040, in current dollars. Weber County passed their third quarter local option sales tax in 2008. Local officials have not designated an amount or percentage that will be spent on highway or transit projects, but the majority is currently to be used on local and state roadways. For planning purposes, the WFRC has made the assumption that all funding derived

LOCAL OPTION SALES TAX – SPLIT BY MODE TABLE 5 - 2

QUARTERS	YEAR	TRANSIT	HIGHWAY	TOTAL			
Salt Lake County							
1st, 2nd, and 3rd	Existing	0.6875	0.1125	0.80			
4 th and 5 th	2017	0.375	0.125	0.50			
Total		1.0625	0.2375	1.30			
	D	avis County					
1st and 2nd	Existing	0.55	0.00	0.55			
3rd, 4th, and 5th	2017	0.50	0.25	0.75			
Total		1.05	0.25	1.30			
	Weber County						
1st, 2nd, and 3rd	Existing	0.675	0.125	0.80			
4 th and 5 th	2017	0.375	0.125	0.50			
Total		1.05	0.25	1.30			
Box Elder County							
1 st	Existing	0.30	0.00	0.30			
2 nd , 3 rd , 4 th and 5 th	2017	0.75	0.25	0.75			
Total		1.05	0.25	1.05			



from this source will be used on roads until 2017 and then about half of the one-quarter percent (.125 percent) sales tax will be used for roadway projects through the year 2040. These sources will generates approximately \$141,000,000, in current dollars, for state and local roads in Weber County between 2015 and 2040. Box Elder County's existing local option quarter cent sales tax only funds transit. The 2015 – 2040 RTP also assumes that an additional one-half cent sales tax will be approved in all three Counties in 2017, with about .125 percent for highways available in Salt Lake and Weber Counties. The new sales tax revenues would generate approximately \$759,000,000, in current dollars, for roadways in Salt Lake County and \$122,000,000, in current dollars, for roadways in Weber County through 2040. The 2015 - 2040 RTP also assumes that an additional threequarter cent local option sales tax would be approved in Davis and Box Elder County, with .25 percent being

used for roadways. This would generate approximately \$295,000,000 for roads in Davis County and \$39,000,000 for roads in Box Elder County by 2040, in current dollars. The remaining increases in local option sales taxes would be directed towards transit. Table 5-2, provides a more detailed allocation of the local option sales tax. Revenues from the local option sales taxes in the WFRC urbanized areas are projected to grow at 4.42 percent per year.

Additionally, a portion of the \$10 vehicle registration fee for corridor preservation, approved in Salt Lake County in 2006, and approved in Davis and Weber Counties in 2007, could be used for Utah state and local facilities. Vehicle registrations were projected to grow at about 4.04 percent per year through 2040, existing local option vehicle registrations will generate approximately \$242,000,000 in Salt Lake County, \$70,000,000 in Davis County, and \$55,000,000 in Weber County, all in current

TABLE 5 - 3 PROJECTED REGIONAL AND LOCAL HIGHWAY REVENUE 2015-2040

SOURCE	AMOUNT (In current dollars)
Regional and Local Revenue	
Surface Transportation Program (STP)	\$449,000,000
Congestion Mitigation / Air Quality (CMAQ)	\$114,000,000
Class B and C Program Funds	\$1,208,000,000
Local General Fund Contributions	\$1,842,000,000
Salt Lake County Existing Local Option Sales Tax (.1125 percent)	\$738,000,000
Weber County Existing Local Option Sales Tax (.125 percent)	\$141,000,000
Salt Lake County Sales Tax (2017125 percent)	\$759,000,000
Davis County Sales Tax (201725 percent)	\$295,000,000
Weber County Sales Tax (2017125 percent)	\$122,000,000
Box Elder County Sales Tax (201725 percent)	\$39,000,000
Salt Lake County Existing \$10 Vehicle Registration	\$242,000,000
Davis County Existing \$10 Vehicle Registration Fee	\$70,000,000
Weber County Existing \$10 Vehicle Registration Fee	\$55,000,000
Salt Lake County \$5 Vehicle Registration Fee (2020, 2030, and 2040)	\$154,000,000
Davis County \$5 Vehicle Registration Fee (2020, 2030, and 2040)	\$44,000,000
Weber County \$5 Vehicle Registration Fee (2020, 2030, and 2040)	\$35,000,000
Salt Lake County Local Option Fuel Tax (2027 - \$.05 per gallon)	\$215,000,000
Davis County Local Option Fuel Tax (2027 - \$.05 per gallon)	\$71,000,000
Weber County Local Option Fuel Tax (2027 - \$.05 per gallon)	\$38,000,000
Total Regional and Local Highway Revenue	\$6,631,000,000



dollars. The local option vehicle registration fee is assumed to be increased by \$5 per vehicle in 2020, 2030, and 2040. This new local option vehicle registration fee could generate approximately \$154,000,000 in Salt Lake County, \$44,000,000 in Davis County, and \$35,000,000 in Weber County in current dollars.

The WFRC assumes that a local option motor fuel and special fuel tax will be adopted by Salt Lake, Davis, and Weber Counties in 2027. The local option fuel tax is projected to be levied at five cents per gallon. This new local option fuel tax would generate approximately \$215,000,000 in Salt Lake County, \$71,000,000 in Davis County, and \$38,000,000 in Weber County in current dollars. Table 5-3 summarizes the amount of regional and local highway revenue projected through 2040.

TRANSIT REVENUE SOURCES

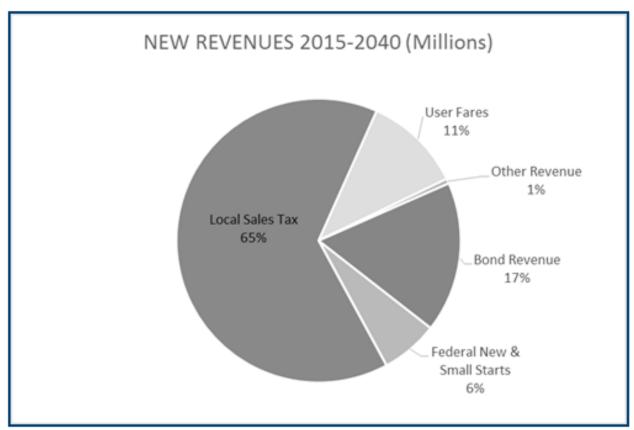
The Utah Transit Authority expanded tremendously during the previous two decades. The Authority is still in the process of absorbing the increased operation and maintenance costs associated with the expansion. The revenues forecasted to be derived from existing sources

are anticipated only to cover the costs of operating, maintaining and administering the system as it exists today. None of the new, proposed 2015 – 2040 RTP projects can be funded with the forecasts for existing revenue streams and will require new sources of revenue such as the following:

- Increases in local option sales tax for transit or its equivalent
- Fares forecasted from the increased transit ridership tied to the proposals
- Bond revenues
- Competitive federal grants awarded noteworthy projects
- Increases in federal formula grants that are tied in part to the proposed service increases

Project funding for transit represents a \$6,000,000,000 increase, or 35 percent increase over the \$11,200,000,000 existing revenue. **Figure 5-1** provides a graphical representation of the new funding from the major sources assumed to be available to pay for transit improvements in the 2015 – 2040 RTP. With the exception of federal formula grants, each source will be discussed below. All values are shown in current dollars

FIGURE 5 - 1 NEW REVENUE BY ASSUMED SOURCES





rather than inflated, year of expenditure dollars unless otherwise stated.

Local Sales Tax Revenue

Local option sale tax revenue, or the equivalent, represents 65 percent of anticipated new transit funding for the 2015 – 2040 RTP. In the recent past, support for additional transit funding by local governments, the business community, citizens, and the Utah State legislators have resulted in significant new local option sales tax being approved for transit expansion. In the 2015 Legislative Session a local option sales tax increase was authorized and current polls indicate a majority of the citizenry are in favor of it. The 2015 – 2040 RTP, similar to the 2011 – 2040 RTP, assumes that by 2017 the local sales tax revenues will increase to about 1.05.

percent of each dollar of sales throughout the UTA service area. These revenues are assumed to grow in line with UTA forecasts for current sales tax revenues. Overall, an average annual growth rate of 5 percent is anticipated.

The Utah Transit Authority uses the above outlined growth assumptions for the preparation of its annual budget, in demonstrating financial capacity to federal officials, and for proving credit worthiness to bond rating agencies. Total local sales tax revenue, derived from the existing sales tax levels through 2040, is projected to be \$6,900,000,000. Future receipts from the increased local sales tax rates for this period are projected to be \$3,900,000,000, again representing 65 percent of all RTP revenue. Table 5-4 summarizes the annual and total transit revenue amounts derived from local option sales tax funds for the period between 2015 and 2040.

TABLE 5 - 4 TRANSIT LOCAL OPTION SALES TAX YEAR OF EXPENDITURE DOLLARS

QUARTERS	YEAR	TRANSIT	MID PLAN ANNUAL REVENUE	TOTAL 2015 - 2040 REVENUE		
	Salt	Lake County				
1 st , 2 nd , and 3 rd	Existing	0.6875	\$260m	\$7,500m		
4 th and 5 th	2017	0.3750	\$137m	\$3,600m		
Total		1.0625				
	Da	ivis County				
1st and 2nd	Existing	0.55	\$39m	\$1,100m		
3 rd , 4 th , and 5 th	2017	0.50	\$37m	\$946m		
Total		1.05				
	We	eber County				
1 st , and 2 nd	Existing Allocations*	0.55	\$32m	\$936m		
3 ^{rd*} , 4 th and 5 th	2017*	0.50	\$29m	\$778m		
Total*		1.05				
	Вох	Elder County				
1 st	Existing	0.30	\$3m	\$74m		
2 nd , 3 rd , 4 th and 5 th	2017	0.75	\$2m	\$61m		
Total		1.05				
Tooele County						
1 st	Existing	0.30	\$3m	\$77m		
2 nd , 3 rd , 4 th and 5 th	2017	0.75	\$7m	\$175m		
Total		1.05				
*It is assumed that Weber County will begin allocating funding from the 2008 sales tax to transit in 2017						



Fare Revenue

The WFRC anticipates that 11 percent of the new revenues called for in the 2015 – 2040 RTP will be generated from fares which patrons will pay to use new transit services. These estimates of future fare revenues are based on the WFRC travel model. UTA ridership elasticity, and UTA assumptions regarding fare increases. The WFRC travel demand model is the regionally and federally recognized computer model which is used to forecast highway and transit use. The UTA ridership elasticity values, and UTA assumptions regarding fare increases, are derived from the master financial spreadsheet. The spreadsheet is used by UTA for annual budget preparation, to demonstrate financial capacity to the federal officials for New Starts Projects, and to demonstrate its credit worthiness to bond rating agencies.

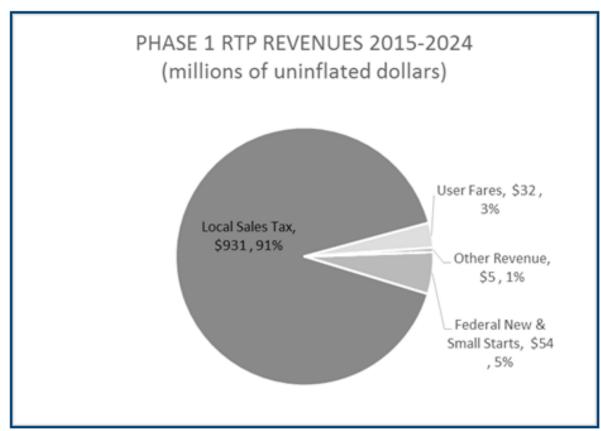
The Utah Transit Authority's ridership will increase as transit projects proposed in the 2015 – 2040 RTP are implemented and service is improved. Total ridership is projected to be about 214,000 linked trips starting in the WFRC area each weekday in 2040. As for fare increases, UTA anticipates that it will need to increase the average

fare per boarding of approximately two percent per year over the period of time covered by the RTP. Between 1999 and 2013, the average fare per boarding increased by 5.2 percent per year. To summarize, new fare revenues generated from ridership on UTA services will net \$675,000,000 over the next 26 years.

Project Construction Bonds

Approximately 17 percent of anticipated new transit revenues for the 2015 – 2040 RTP are loans that UTA would secure in the form of bonds issued in order to accelerate the transit program. The Utah Transit Authority has the authority to bond, provided that the total anticipated net agency revenues available for debt service and capital purchases exceed the bond payments by at least 14.5 percent. Additionally, UTA requires that its debt load not exceed 3 percent of its total asset value. Currently, UTA has no additional bonding capacity beyond that which has already been used. However, some bonding capacity is anticipated starting at the end of the first phase of the 2015 – 2040 RTP. The cost of bonding is dependent upon how attractive a bond offer is to investors. The municipal bond market traditionally offers low risk, tax free income for investors.

FIGURE 5 - 2 PHASE 1 – PROJECTED NEW TRANSIT REVENUES BY SOURCE





PHASE 2 – PROJECTED NEW TRANSIT REVENUES BY SOURCE **FIGURE 5 - 3**

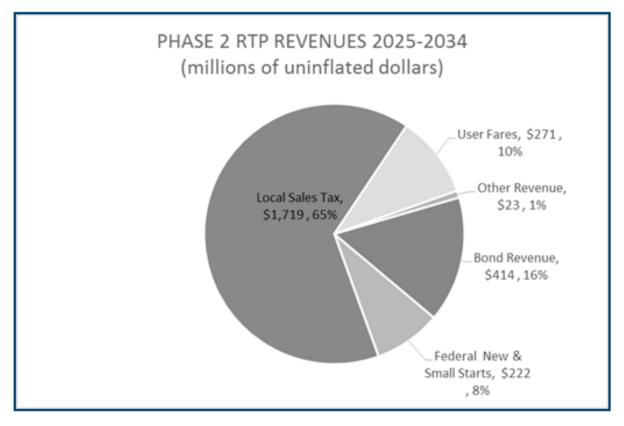
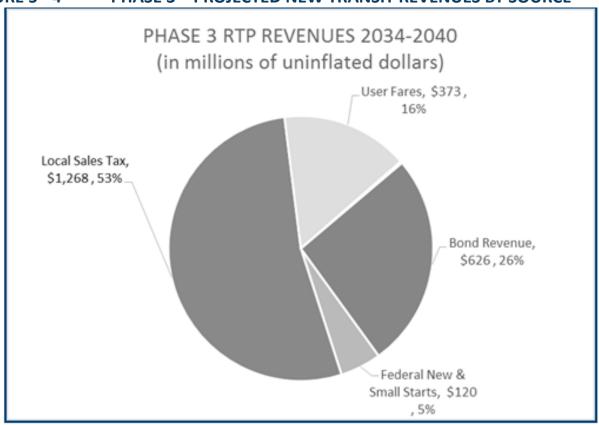


FIGURE 5 - 4 PHASE 3 – PROJECTED NEW TRANSIT REVENUES BY SOURCE





Federal Competitive Grants

The WFRC anticipated that 6 percent of new revenues for the 2015 – 2040 RTP are federal grants awarded to noteworthy projects. These types of grants are competed for on a nationwide basis and they typically pay about 50 percent of the construction costs of awarded projects. Nominated projects need to meet specified requirements. The award selection process is guided by a rigorous planning process and a set of selection criteria. Historically, the U.S. Congress authorizes about \$1,500,000,000 each budget year for "new starts" programs. Sequestration affects these funding sources and is still in effect. However, the 2015 – 2040 RTP anticipates the receipt of \$396,000,000 from these sources over the course of the next 26 years.

The various new transit revenue sources assumed for the 2015 – 2040 RTP have been broken out into the three phases identified for the regional transportation plan. Figures 5-2, 5-3, and 5-4 show the dollar amounts in current year dollars and percentage for each source of revenue.

PROJECTED COSTS OVERVIEW

The costs for making needed improvements for both highways and transit, as identified by the 2015 – 2040 RTP, were analyzed by the WFRC, UDOT, UTA and the other local MPOs. Costs include those required to meet the specific system needs identified in the 2015 – 2040 RTP, as well as cost estimates for general administration. operations, maintenance, and preservation of the existing transportation system. Projected costs for highway improvements have been adjusted at an annual 4 percent inflation rate, while the projected costs for transit operations and maintenance have been adjusted at an annual 2.3 percent rate.

STATEWIDE HIGHWAY COST ESTIMATES

For purposes of the 2015 – 2040 RTP, the Utah Department of Transportation has estimated the current costs to operate, maintain and preserve, and administer the Utah State highway system. In addition, through its asset management program, UDOT has estimated the future level of funding needed to maintain UDOT's system. For planning purposes the Financial Subcommittee of the Utah's Unified Plan Executive Committee assumes that future construction projects will include system maintenance and preservation, with an annual growth rate of 4.5 percent for both categories.

Though UDOTs asset management program, interstate rehab, interstate preservation, National Highway System (NHS) Rehab, NHS Preservation, Surface Transportation Program Rehab, and STP Preservation costs were identified using the current condition of the roadway, maintenance and preservation requirements, and other factors. Costs were based on conditions of individual facilities and then summarized by planning area. Within the Wasatch Front Region's urbanized areas, it is projected that \$1,423,000,000 is needed for all UDOT pavement needs in the WFRC Urbanized Areas. The Utah Department of Transportation has identified various "other costs" categories including pipe culvert replacement, traffic signal maintenance, traffic management replacement, barrier replacement, lighting, sign modification, safety spot improvement, traffic signals replacement, and maintenance spot improvement. Based on UDOT assumptions, about \$132,000,000 will be required for other expenditures from 2015 through 2040 in the WFRC urbanized areas.

As part of the planning process, UDOT estimated its statewide costs for bridge maintenance and replacement activities. Based on UDOT assumptions, about \$438,000,000 is needed for bridge preservation and replacements between 2015 and 2040 in the WFRC urbanized areas.

TABLE 5 - 5 PROJECTED STATEWIDE HIGHWAY COSTS 2015-2014

UDOT EXPENDITURES	AMOUNT (In current dollars)
Roadway Preservation Needs	\$1,423,000,000
Other Needs	\$132,000,000
Bridge Needs	\$438,000,000
Operations and Various Needs	\$11,001,000,000
Capacity Needs	\$9,100,000,000
Total UDOT Costs, Expenditures, and Transfers	\$22,094,000,000



The Utah Department of Transportation's expenditures include support services, engineering services, maintenance management (Operations), construction management, region management, equipment management, aeronautics, share-the-road, B and C distribution, safe sidewalks, mineral lease, corridor preservation, toll way, counties of the 1st and 2nd class, highway projects within counties, and non-appropriated. Transfers and diversions of UDOT funds include sales of capital assets, transfers to and from the Transportation Investment Fund, and other transfers. These operations and other expenses total \$11,001,000,000 over the next 26 years, in current dollars for the WFRC urbanized area. For the planning purposes of the 2015 – 2040 RTP, some of these expenditures and transfers were not specifically allocated to the WFRC, but were kept at a statewide level. The majority of these funds is simply passed through to other state agencies or is not specific to Wasatch Front region. Thus, they are more suited to be kept at a statewide level. The Utah Department of Transportation estimates that the future amount of diversions to other government agencies will continue at the same rate as in previous years – approximately 3.24 percent. Table 5-5 summarizes the amount of statewide highway operation and preservation costs projected from 2015 to 2040.

Capacity needs and the selection process for projects in the 2015 – 2040 RTP will be explained in more detail in the chapters titled Select Projects and Phase and Finalize Planned Projects, but total approximately \$9,100,000,000 for UDOT project in the WFRC area.

The total UDOT projected needs for the Wasatch Front Region totals \$22,094,000,000. All costs are projected to grow at 4.5 percent per year, including 4 percent for construction inflation and .5 percent for growth in the roadway system.

LOCAL HIGHWAY COST ESTIMATES

Estimates were made for municipalities and counties with assistance from the Utah League of Cities and Towns (ULCT), the Utah Association of Counties (UAC), the Utah Foundation, and the Utah Local Technical Assistance Program (Utah LTAP). These assumptions are based on a survey of local agency highway expenses, various studies, and available data. Growth and inflation assumptions were applied to these cost totals for the period 2015 through 2040. Table 5-6, entitled "Projected Local Highway Cost 2015 – 2040" is shown below.

Administration / Traffic Operations And Safety / and Other Costs

Administration costs are expenditures associated with managing transportation agencies and the transportation divisions of larger local public works departments. These costs include expenditures for staff, planning activities, preliminary engineering, etc. Traffic operations activity includes signing, marking, and signal installation and maintenance. Safety improvements include hazard elimination, intersection upgrades, railroad crossing improvements, and similar projects. It is estimated that these items will cost about \$458,000,000 between 2015 and 2040, in current dollars.

Maintenance and Preservation Needs

Local highway maintenance activities include snow removal, sweeping, weed control, crack sealing, pothole repair, etc. Pavement preservation actions are surface treatments for streets and highways, which are more extensive than routine maintenance. These treatments range from chip seal work to full reconstruction and major resurfacing. It is estimated that during the period 2015 – 2040, local governments maintenance and preservation need will be approximately \$3,659,000,000 on maintenance and preservation activities.

Capacity needs for local roads of regional significance and the selection process for these projects in the 2015 – 2040 RTP will be explained in more detail in the chapters titled Select Projects and Phase and Finalize Planned Projects, but total approximately \$2,422,000,000 for local project in the WFRC area. Locally classified roads capacity

PROJECTED LOCAL HIGHWAY COSTS 2015-2040 **TABLE 5 - 6**

EXPENDITURES	AMOUNT
Administration / Traffic Operations and Safety / Other Needs	\$458,000,000
Maintenance And Preservation Needs	\$3,659,000,000
Capacity Needs	\$3,004,000,000
Total Local Highway Costs	\$7,121,000,000



needs will be approximately \$582,000,000 by 2040. These total \$3,004,000,000 of local capacity needs.

The total local projected needs for the Wasatch Front Region totals \$22,094,000,000. All costs are projected to grow at 4.5 percent per year, including 4 percent for construction inflation and .5 percent for growth in the roadway system.

TRANSIT COST ESTIMATES

The Wasatch Front's Regional Transportation Plan for 2015 – 2040 must be cost constrained. Only projects tied to reasonable funding assumptions can be included in the RTP. Costs were estimated for the new transit service and projects in the 2015 – 2040 RTP in order to determine which could be included in each of the RTP's three funded phases. Construction, operation, maintenance, administration, facility, and debt service costs were all estimated for the RTP's recommended services and projects. The first portion of this section will briefly discuss how cost figures of the 2015 – 2040 RTP were estimated and total costs are summarized at the end of this section. The RTP's transit costs fall into the following three general categories:

- Large Project Costs and Debt Service
- Service Increases/Programmatic Line Items
- Inflation

All costs are reported in uninflated, current year, dollars in order to portray their order of magnitude.

Large Project Costs and Debt Service

The Utah Transit Authority has substantial experience with building and operating transit systems. The Wasatch Front Regional Council took advantage of this experience by working closely with UTA to estimate costs. Large project capital cost estimates include construction, acquisition of vehicles, and vehicle maintenance facilities. Large project operating costs include the direct operations, administration costs, daily maintenance and some major repairs. Directly related to project capital costs but handled separately is the Debt Service and vehicle replacement associated with the projects.

Project Costs were estimated using generic unit costs unless specific studies have produced cost estimates more specific to the subject question. Where specific studies have resulted in more refined cost estimates, these costs were used. All generic costs are presented in uninflated, 2015 dollars. The project list, located in

the chapter titled Finalize Planned Projects, provides individual project capital and operating costs. A more detailed breakdown of the unit costs is provided in Appendix I entitled, "Transit Costs Breakdown."

Rail

The total cost of 2015 – 2040 RTP rail project construction and new operations is \$971,000,000. No typical commuter rail, line upgrade, or light rail capital costs were used in the 2015 – 2040 RTP. All Commuter Rail and line upgrade capital costs were individually assessed by UTA's Capital Development Department and the cost of the Draper South TRAX extension, the only funded light rail line, was obtained from its specific study. Corridor preservation projects for future UTA commuter rail and light rail projects on existing, fully dedicated, fixed guideways were estimated to cost \$1,100,000 and \$1,000,000 a mile, respectively.

Typical streetcar capital costs were estimated to be \$44,900,000 per mile. This includes, among other things, \$14,700,000 for track and right-of-way, a \$316,000 per mile allotment for maintenance facility construction, four stations per mile at \$450 million each, and a 30 percent contingency. Operating and maintenance costs for streetcar and light-rail lines are calculated as \$365,872 per year per mile. This estimate is based on information provided by the National Transit Database as reported by UTA.

Bus Rapid Transit

The total cost of 2015 – 2040 RTP new Bus Rapid Transit (BRT II) project construction and operations is \$1,976,000,000. Typical BRT II capital costs were estimated to be \$15,500,000 per mile. This includes, among other things, \$6,500,000 for exclusive lanes and right-of-way, a \$250,000 per mile allotment for maintenance facility construction, four stations per mile at \$450 million each, and a 30 percent contingency. Operating and maintenance costs for BRT II are calculated at \$344,137 per year per mile, based upon cost National Transit Database costs as reported by UTA. Corridor preservation projects for BRT on existing, independent transit guideways were estimated to cost \$1,100,000 per mile.

Enhanced Bus (BRT1)

The total cost of 2015 – 2040 RTP Enhanced Bus (BRT I) project construction and operations is \$913,000,000. Typical Enhanced Bus (BRT I) capital costs were estimated to be \$2,200,000 per mile. Capital costs includes among



other things, \$800,000 for stations, signal priority, \$131,500 for a maintenance facility, and 30 percent for contingencies. If a transit project is constructed at the same time as a roadway project, overall costs were assumed to be reduced by approximately 10 percent, or \$2,000,000 per mile. Operating and maintenance expenses for Enhanced Bus (BRTI) are calculated as \$344,137 per year per mile based upon National Transit Database costs as reported by UTA for local bus.

Other Projects

Other projects in the 2015-2040 RTP include park and ride lots, transit hubs, and vehicle maintenance facilities or Garages. These are in addition to the "minor capital projects" in UTA's Transit Development Program. The total cost of 2015 – 2040 RTP 'other projects' construction is \$97,200,000. The majority of these costs is from the Depot District/Central Garage project at an estimated cost of \$50,200,000. Next terms of cost is the Mt. Ogden Garage at an estimated cost of \$15,000,000. Typical park and ride facilities and transit hubs costs were estimated to be about \$2,500,000 each. More complex park and ride and hub costs are naturally cost more. The Layton FrontRunner Station parking structure was estimated to cost about \$4,500,000 and the 200 South Transit hub stretching from 650 West to 200 East about \$5,000,000.

Bonding

Bonding can generally be used to accelerate the implementation of larger projects. The 2015 – 2040 RTP recommends an aggressive transit project schedule. This strategy will requires incurring additional debt and debt payments above that which UTA has already entered into for commuter rail construction and other past capital development programs. Additional debt service for the 2015 – 2040 RTP major capital projects is anticipated to be as follows: \$0 in the first phase; \$120 million in the second phase; and \$431,000,000 in the third phase. An additional \$700,000,000 in debt will be outstanding at the end of 2040. Interest payments after 2040 will amount to \$420,000,000, of which \$220,000,000 would have been incurred for 2015 – 2040 RTP transit projects.

Service Increases/Programmatic Line Items

Programmatic line items are groups of small projects that would not typically be addressed in a regional transportation plan, but are of special interest to the Region's transportation agencies. Funded programmatic line items in the transit project list are: (1) Asset Management / State of Good Repair; (2) Intelligent Transportation Systems; and (3) Local Bus and Existing

Rail System Span of Service Increases. Each of these line item types are detailed below. All of the programmatic line item costs are estimated using a UTA master spreadsheet. This planning tool is used by UTA to guide its annual budgeting efforts, to meet federal requirements, and to demonstrate financial stability to bonding agencies.

Asset Management / State of Good Repair

Asset Management / State of Good Repair (AM/SOGR) refers to maintenance, overhaul, and replacement of assets like rail and bus vehicles, railroad track and Bus Rapid Transit lanes, railroad crossings, and station platforms. AM/SOGR is identified in the 2015 – 2040 RTP both for the management of existing assets and for the management of future assets constructed as part of the 2015 - 2040 RTP.

AM/SOGR for existing transit facilities is a substantial portion of total future transit costs. Between 1996 and 2014, 134 miles of rail were built along the Wasatch Front at a construction cost of about \$4,700,000,000 in current year (2015) dollars. The Utah Transit Authority also has nearly 1,100 buses and vans, 200 rail vehicles, and multiple administrative facilities with related equipment. Often it is more costly to conduct repairs to a facility than it cost to build it in the first place in part because it is in use while you are making the repairs.

The latest federal reauthorization of transportation funding requires transit agencies to develop an asset management plan. The Utah Transit Authority's state of good repair practices were recognized by FTA in the January 2, 2015, Transit Asset Management Newsletter as noteworthy in the development of a state of good repair evaluation process. The UTA's Capital Development Department has conducted a preliminary analysis of state of good repair for the 2015 – 2040 RTP. The costs attributed to the management and state of good repair of current assets are directly from this UTA effort. The UTA analysis was reviewed by Lewis, Young, Robertson, and Burningham, Inc., which is an independent municipal securities firm. These total costs amount to \$2,466,000,000.

The AM/SOGR for future assets constructed as part of the 2015 – 2040 RTP is a relatively minor portion of total future transit costs. This is because a substantial portion of the capital facilities are proposed for initial construction well into the RTP planning horizon and would not be anticipated to need major reconstruction until after the 2015 – 2040 RTPs 2040 planning horizon. Forecasts for future project AS/SOGR were based by



UTA upon a portion of the initial project capital costs and the project life-cycle. These total costs amount to \$208,000,000.

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) refers to electronic applications which aid in management of transit facilities such as vehicles and parking garages and which provide the traveler information in real time with which their behavior can be influenced or their trip can be more pleasant. Potential benefits include better preventative maintenance, more rapid response to vehicle breakdowns, direction to available parking spaces, or real time vehicle arrival information. Costs for these types of improvements are programmed to continue at current levels through 2040 in the 2015 – 2040 RTP.

Local Bus and Existing Rail System Span of Service Increases

Refers to service increases that improve the hours and days of service, the frequency of service for existing local bus and rail or the geographic coverage of bus service. About \$1,000,000 is programmed in the 2015 – 2040 RTP for these costs.

Inflation

As stated previously, unless stated otherwise, all the costs in the 2015 – 2040 RTP are provided in 2015 dollars. The vast majority of transit costs in the 2015 – 2040 RTP were initially estimated in 2015 dollars and were then inflated to year of expenditure dollars using a 2.3 percent annual rate. This rate of inflation was derived from the national Consumer Price Index and has been adopted by the UTA Board of Directors for use in their master spreadsheet. This spreadsheet is used to calculate the costs of construction projects and operating and maintenance costs.

Cost Summary

Costs associated with projects in the 2015 – 2040 RTP, by general category of expenditure, are graphically displayed in Figure 5-5. These same costs are broken out by the 2015 – 2040 RTP's three funded phases in Figures 5-6, 5-7. and 5-8.



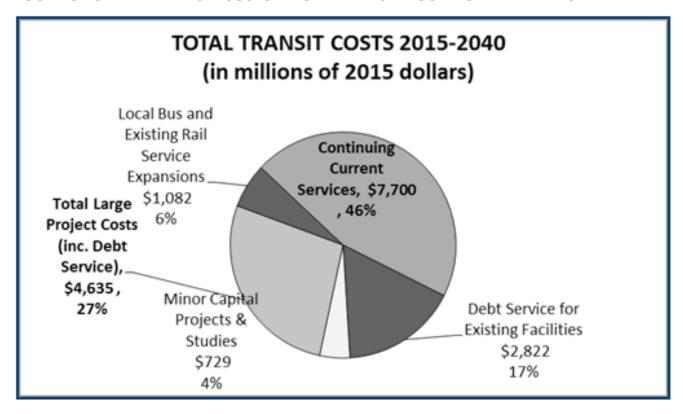




FIGURE 5 - 6 PHASE 1 – PROJECTED TRANSIT COSTS BY CATEGORY OF EXPENDITURE

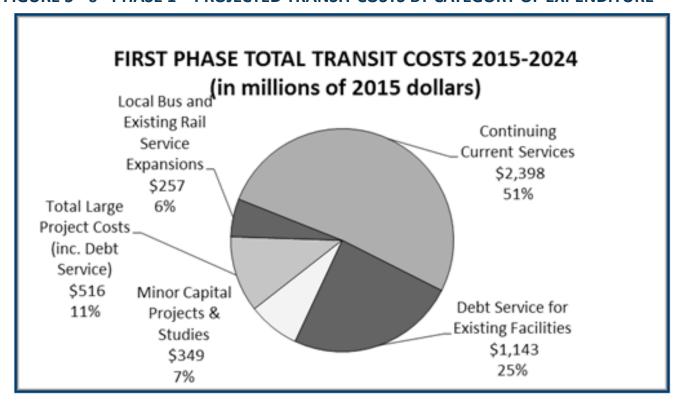
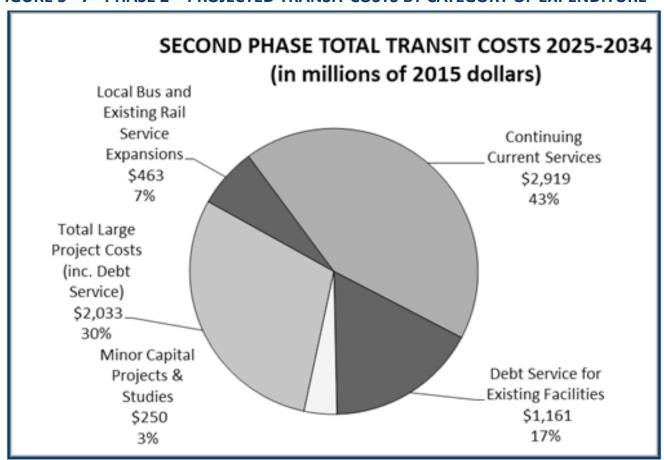


FIGURE 5 - 7 PHASE 2 – PROJECTED TRANSIT COSTS BY CATEGORY OF EXPENDITURE





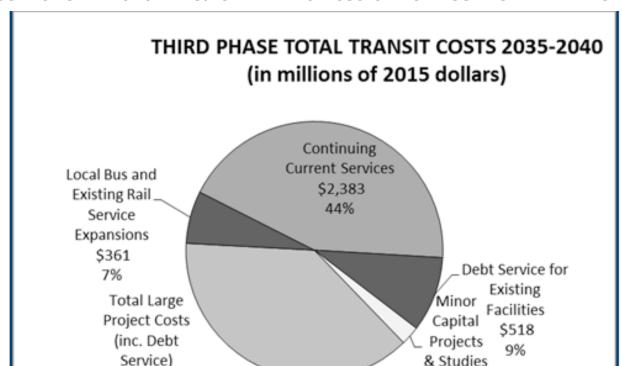


FIGURE 5 - 8 PHASE 3 – PROJECTED TRANSIT COSTS BY CATEGORY OF EXPENDITURE

BICYCLE COST ESTIMATES

To arrive at a cost per mile, every state facility that had a planned bike facility on the UCATS network was assessed for shoulder width. Using the known shoulder widths as derived from the UDOT lidar data, an additional width needed to add a bike facility in the range of 4-6 feet depending on speeds and traffic data was determined. Then costs for additional pavement and base depending on pavement type were used to calculate a total cost for the system based on width needed. The total cost was then divided by the number of miles of remaining planned bike facilities to determine a cost per mile estimate.

\$2,086

38%

This cost estimate was applied to all proposed bike lane projects, less those that lie on widening or new construction highway projects in the Regional Transportation Plan, as bicycle facility considerations are assumed to be included in these project scopes. Additionally, projects outside the urbanized boundary are assumed to not lie on the road system and will have different costs associated; these routes were therefore excluded. The cost estimate was multiplied by the number of miles of remaining planned bike facilities, for both the Priority and Base Networks.

Table 5-7 explains Base Bicycle Network Cost Methodology. See below for step-by-step methodology process to estimate bicycle costs for the base network. The total cost estimate for the base bicycle network is \$244,015,000.

\$131

2%

The cost estimate for the Regional Priority Bicycle Network follows the same cost assumptions as the base bicycle cost estimate. The total cost estimate for the Regional Priority Bicycle Network is \$113,775,000The following methodology was used.

- 1. Select proposed routes in the Priority Bike Network. Result: 801 bike lane segments.
- 2. Select bike routes which overlap widening and new construction highway projects (168 selected), eliminate these routes. Result: 633 remaining lines;
- 3. Apply cost estimate to remaining bicycle network.



TABLE 5 - 7 BASE BICYCLE NETWORK COST METHODOLOGY

1: Select proposed projects in Base Bike Network.

COUNTY	NUMBER OF SEGMENTS; LENGTH		
Salt Lake County	765 bike lane segments;	590 miles	
Davis County	333 bike lane segments;	327 miles	
Weber County	656 bike lane segments;	631 miles	
Box Elder County	106 bike lane segments;	118 miles	
Total	1860 bike lanes segments; 1	666 miles	

2: Eliminate bike routes which overlap widening and new construction highway projects; exclude trails outside Urbanized Area boundary.

COUNTY	REMAINING LINES; LENGTH		
Salt Lake County	688 remaining lines; 480 miles		
Davis County	293 remaining lines; 270 miles		
Weber County	539 remaining lines; 465 miles		
Box Elder County	98 remaining lines; 104 miles		
Total	1618 remaining lines; 1319 miles		

Apply cost estimate to bike network mileage.

COUNTY	LENGTH x COST; TOTAL COST		
Salt Lake County	480 miles x 185k/mile = \$ 88,800,000		
Davis County	270 miles x 185k/mile = \$ 49,950,000		
Weber County	465 miles x 185k/mile = \$ 86,025,000		
Box Elder County	104 miles x 185k/mile = \$ 19,240,000		
Total	1319 miles x 185k/mile = \$244,015,000		

SUMMARY

Statewide funding available to UDOT for capacity enhancement projects is divided among Utah's four MPOs based on each organization's proportion of the State's population. The 2015 – 2040 RTP assumes that the Wasatch Front Regional Council will receive 57.3 percent of available State funding in 2015. After that date, the percentage decrease each year until it reaches 51.4 percent by 2040.

Summarized below, and in Tables 5-8, 5-9, and 5-10, are revenues to be used for enhancing capacity, preservation and maintenance, operations, and meet the needs of state and local roads of regional significance. The cost for highway projects to meet capacity needs, by RTP phase, is presented when the project is needed. All revenues and

costs in previous section of this chapter are presented in future values. The net present values were used to financially constrain the 2015 – 2040 RTP.

Highway Capacity Improvement

It is projected that approximately \$6,591,000,000, resulting from existing funding sources, is available for capacity improvements to state highways, about \$703,000,000 of funding will come from new revenue sources and \$100,000,000 from bonding in the WFRC Urbanized Area, in current dollars. Of the approximate \$9,100,000,000 of capacity project needs, there will only be about \$7,394,000,000 of funding, in current dollars. This results in over \$1,700,000,000 of unfunded statewide roadway projects that are needed between 2015 and 2040.



TABLE 5 - 8 STATE AND LOCAL HIGHWAY CAPACITY FUNDING ALLOCATIONS 2015-2040

CAPACITY (NPV)						
State Roads	2015-2024	2025-2034	2035-2040	2015 - 2040		
Existing Revenues	1,450,350,788	3,130,720,112	2,009,563,440	6,590,634,339		
New Revenues	165,921,743	297,691,557	239,390,680	703,003,979		
Financing	1,219,188,538	(644,810,957)	(474,436,681)	99,940,900		
Needs	3,776,538,307	3,797,136,197	1,526,592,587	9,100,267,091		
Unfunded Capacity Needs	(941,077,239)	(1,013,535,485)	247,924,851	(1,706,687,873)		
Local Roads of Regional Significance	2015-2024	2025-2034	2035-2040	2015 - 2040		
Existing Revenues	579,093,164	546,009,655	318,547,953	1,443,650,772		
New Revenues	233,346,632	432,843,442	300,830,967	967,021,041		
Financing						
Needs	1,217,166,296	645,225,952	559,447,120	2,421,839,368		
Unfunded Capacity Needs	(404,726,500)	333,627,146	59,931,799	(11,167,555)		
Local Roads	2015-2024	2025-2034	2035-2040	2015 - 2040		
Existing Revenues	135,253,342	129,233,567	76,111,280	340,598,189		
New Revenues	58,336,658	108,210,861	75,207,742	241,755,260		
Financing						
Needs	193,590,000	237,444,427	151,319,022	582,353,449		
Unfunded Capacity Needs						

TABLE 5 - 9 STATE AND LOCAL HIGHWAY PRESERVATION FUNDING ALLOCATIONS 2015-2040

PRESERVATION (NPV)						
State Preservation	2015-2024	2025-2034	2035-2040	2015 - 2040		
Existing Revenues	561,726,515	588,190,708	308,360,498	1,458,277,721		
New Revenues	70,032,860	131,405,576	109,229,028	310,667,464		
Financing						
Needs	736,156,106	773,965,786	482,514,071	1,992,635,963		
Unfunded State Preservation Needs	(104,396,732)	(54,369,502)	(64,924,544)	(223,690,778)		
Regional and Local Preservation	2015-2024	2025-2034	2035-2040	2015 - 2040		
Existing Revenues	974,101,223	807,265,114	416,495,388	2,197,861,724		
New Revenues	291,683,290	541,054,303	376,038,708	1,208,776,301		
Financing						
Needs	1,353,489,942	1,419,987,575	885,263,919	3,658,741,437		
Unfunded Local Preservation Needs	(87,705,430)	(71,668,158)	(92,729,824)	(252,103,412)		

TABLE 5 - 10 STATE AND LOCAL OPERATIONS FUNDING ALLOCATIONS 2015-2040

OPERATIONS (NPV)						
State/County/Local Operations 2015-2024 2025-2034 2035-2040 2015 - 2040						
Existing Revenues	5,039,173,184	4,203,250,615	2,216,463,697	11,458,887,495		
New Revenues						
Needs	5,039,173,184	4,203,250,615	2,216,463,697	11,458,887,495		
Unfunded Operation Needs	-	-	-	-		



Revenues for increasing the capacity of local roads of regional significance in the Wasatch Front- locally owned roads with a classification between arterial and collector street – are estimated at \$1,444,000,000 from existing revenues sources and \$967,000,000 from new revenues sources. There will be about \$2,410,000,000 of funding for local roads of regional significance capacity projects. Financial planners assumed there will be adequate funding through existing and new revenues. Hence, no bonding will be needed and there are no unfunded local highway projects of regional significance.

Funding for local road capacity improvements within Wasatch Front Region is approximately \$341,000,000 from existing revenues, and \$242,000,000 from new revenues, in current dollars. This totals about \$582,000,000 available for locally classified capacity project costs in net present value. The 2015 – 2040 RTP assumes that developer contributions and impact fees will also contribute to the local roadway network and these projects will be built with the development.

Highway Preservation And Maintenance

Preservation and maintenance funds for the state roadways is estimated to be approximately \$1,458,000,000 through existing revenues and \$311,000,000 from new revenues for the Wasatch Front Region. It is projected that there is about \$1,993,000,000 of preservation needs, leaving about \$224,000,000 of unfunded preservation and maintenance projects in the

Wasatch Front between 2015 and 2040.

Funding available for preservation for the local roads within the Wasatch Front Region – both local roads of regional significance and locally classified- is approximately \$2,197,000,000 from existing revenues and \$1,209,000,000 from new revenues. There is approximately \$3,659,000,000 of preservation and maintenance needs, in current dollars. There will be about \$252,000,000 of unfunded local roads projects that are needed between 2015 and 2040.

Operations

Funding available for operations for UDOT and the local communities is approximately \$11,459,000,000 from existing revenues, with no funding assumed new revenues sources. Existing funding sources are projected to meet all operation needs between 2015 and 2040.

Transit Revenues and Costs

Transit improvements recommended for the 2015 – 2040 RTP are fiscally constrained. The existing revenue streams, as outlined in UTA's Transit Development Program, are sufficient to construct, operate, and maintain the existing transit system. The increases to local bus and existing rail as well as the new projects in the Regional Transportation Plan need to be funded through the new revenue sources such as those shown in Tables 5-2 through 5-4. Table 5-11 shows projected

TABLE 5 - 11 TOTAL 2015-2040 PROJECTED TRANSIT REVENUES AND COSTS (Millions Of 2015 Dollars)

	2015-2024	2025-2034	2035-2040	TOTAL
Existing Revenues	\$3,863	\$4,273	\$3,019	\$11,154
Transit Development Program Needs (Existing Service Operation & Preservation, Small Projects, and Reserve)	\$3,863	\$4,273	\$3,019	\$11,154
Transit Development Program Balance	\$0	\$0	\$0	\$0
2015 - 2040 RTP Assumed New Revenues	\$1,022	\$2,648	\$2,392	\$6,062
Financing Costs	\$0	\$120	\$431	\$552
2015 - 2040 RTP Costs (Major Projects and Local Bus/Existing Rail Service Improvements)	\$903	\$2,414	\$2,019	\$5,335
Regional Transportation Plan Balance	\$119	\$114	\$-58	\$175
*Includes bond revenues and debt service through 2040 **\$700,000,000 in debt still outstanding at the end of 2040				



transit revenues and cost estimations for the 2015 – 2040

Bicycle Costs

Bicycle Costs were estimated for the Base Bicycle Network and the Regional Priority Bicycle Network. There are approximately 1319 miles of Base Bicycle routes with an estimated cost of \$244,015,000. Approximately 615 miles of Regional Priority routes will cost nearly \$113,775,000. **Table 5-12** summarizes the Regional Priority and Base Bicycle Network costs.

REGIONAL PRIORITY AND BASE BICYCLE NETWORK COSTS TABLE 5 - 12

BIKE NETWORK	LENGTH; COST
Base Bicycle Network	1319 Miles; \$244,015,000
Regional Priority Bicycle Network	615 Miles; \$113,775,000



SELECT PROJECTS AND PHASE

Based on needs and financial constraints, identify phasing for projects in the preferred scenario.

INTRODUCTION

All highway and transit projects are selected and assigned construction phases based on need and financial constraints. The criteria and methodology that Wasatch Front planners used to select projects and the time phase during which they will be implemented differs slightly by mode. For this reason, highway and transit criteria and methodology will be presented separately. Non-motorized facilities were not refined, ranked, or phased because a constrained funding source for these projects has yet to be identified. Among the elements incorporated into the needs phase of the 2015 – 2040 Regional Transportation Plan will be programmatic line Items, including: existing rail / local bus service, state of good repair / asset management, bike system, and first and last mile solutions. The three time period, or phases, including the unfunded portion of the 2015 – 2040 RTP are as follows:

Phase 1 2015 to 2024 Phase 2 2025 to 2034 Phase 3 2035 to 2040

Unfunded Beyond 2040 (Projects lacking a

confirmed funding source)

The general objectives of the project selection and phasing task of the 2015 – 2040 RTP include the following, in the order shown:

- 1. Refine the regional preferred scenario to a list of defined projects
- 2. Identify the RTP phase in which each project is needed
- 3. Place each project into one of three financially constrained phases or "time horizons"

Preferred Scenario

A draft preferred scenario, derived from the elements found in the four land use and transportation scenarios and was refined with comments and suggestions made by representatives of local governments, transportation partners, and the general public. The preferred scenario includes a complete list of roadway and transit network

needs through the year 2040. The character of the projects in the preferred scenario, such as the roadway width or transit technology desired, was developed through extensive scenario evaluation, analysis, and stakeholder involvement. The preferred scenario, and how it was evaluated, is presented in the chapter titled Create and Evaluate Scenarios.

Project Phasing Based on Need

All highway and transit projects identified in the preferred scenario are needed by 2040. A process was established to compare and evaluate all projects or project by mode. This process placed projects into one of three phases based on priority. Criteria were developed based upon goals and principles developed by the Wasatch Front Regional Council and the United State Department of Transportation, The goals and objectives for the 2015 – 2040 RTP were identified in the chapter titled Establish a Regional Visioning. These goals and objectives were vetted with our planning partners and ultimately adopted by the Wasatch Front Regional Council used in prioritizing projects.

Project Phasing Based on Financial Constraints

After highway and transit projects were prioritized by need, they were then assigned phases in the 2015 – 2040 RTP based upon these priorities and the amount of funding assumed to be available. Once again, the adopted phasing criteria and a variety of other factors were used in this process. The financial plan, including revenue and costs assumptions for the next 26 years, was presented and can be reviewed in the chapter titled Assess Financial Considerations. A highway or transit project is considered "phased' in the 2015 – 2040 RTP when its construction start date falls in one of the three phases. There were more needed projects than anticipated revenue could fund. Therefore, some projects were placed into the "unfunded" category.



HIGHWAY PROJECT SELECTION AND PHASING

Highway projects were placed into phases based on factors including:

- Wasatch Front Regional Council highway phasing
- Congestion Management Process (CMP) evaluation
- Inclusion in the Transportation Improvement Program (TIP)
- Inclusion in the 2011 2040 RTP Phase 1 Inclusion
- Network connectivity connections with phase 1
- Collaborative with planners at the Utah Department of Transportation
- Collaborative with planners at the Utah Transit Authority
- Input from a variety of other key stakeholders including local government representatives and members of the general public

Individual Project Measures

The individual measures considered in defining the highway projects as follows:

- Projected traffic volume to existing highway capacity ratios
- The extent to which the project promotes the use of interconnected streets
- Any known regionally significant relocations or

- community impacts
- Any known serious hazardous materials or natural disaster exposures
- Any other known critical natural or cultural impacts
- Access to regionally significant priority growth areas
- Highway project width, length, and functional classification
- General alignment and interchange location

Highway Phasing Criteria

The WFRC developed criteria to provide a score for each proposed highway project. There are nine criterion with a total possible score of 100. Due to the availability and nature of some of the data. Phase 1 need and Phase 2 need scores were able to be calculated for three of the criteria. The three scores that were calculated for the Phase 1 and Phase 2 highway projects were based on: (1) travel time reduction; (2) benefit / cost ratio; and (3) asset management. The variance in these scores helped place highway projects into the proper phase. Appendix J. entitled "Highway Evaluation And Scoring Criteria" provides detailed results of this analysis.

More detailed descriptions of the data used to provide evaluation scores are provided below. Table 6-1 shows the goals, objectives, and measures for each of the nine evaluation criterion used for highway project phasing.

Criterion 1 - Travel Time Reduction

Travel time reduction was determined by using projected 2024 travel demand modeled on the 2015 – 2020 TIP

TABLE 6 - 1 HIGHWAY PROJECT PHASING CRITERIA SUMMARY

CRITERIA 1. TRAVEL TIME REDUCTION – 25 points possible		
Goal	Mobility & Accessibility	
Objective	Reduced vehicle hours of delay from traffic congestion	
Phase 1 Measure	Volume hours per mile using the 2024 socioeconomics on the 2015 – 2020 Transportation Improvement Plan	Score: 0 - 25 points
Phase 2 Measure	Volume hours per mile using the 2034 socioeconomics on phase 1 needed projects	Score: 0 - 25 points

CRITERIA 2. ACCESS TO OPPORTUNITY – 10 points possible		
Goal	Economic Vitality	
Objective	Access to low income households, multiple-family dwelling u households is improved and connections to major medical facenters is improved	
Measure 1	Access to low income households, multiple-family dwelling units, and/or zero car households	Score: 0 or 5 points
Measure 2	Connections to major medical facilities and education centers	Score: 0 or 5 points



TABLE 6 - 1 (CONTINUED)

CRITERIA 3. URBAN FORM – 10 points possible		
Goal	Urban Form and Community	
Objective	Supports the Wasatch Choice for 2040 and revitalizes the economy	
Measure 1	Connections to WC 2040 Centers	0 or 5 points
Measure 2	Access or connections to infill areas and/or redevelopment areas	0 or 5 points

CRITERIA 4. MULTIMODAL – 10 points possible		
Goal	Cost Efficiency	
Objective	Multiple modes of transportation are considered and coordinated	
Measure 1	Bike lane is on the 2011 bike map 0 - 2 points	
Measure 2	Bike route is considered a UCATS priority bike route	0 - 4 points
Measure 3	Corridor includes a transit project in the RTP	0 – 4 points
Measure 4	Entity has an Active Transportation or Complete Streets Policy	0 or 1 point

CRITERIA 5. PROJECT READINESS – 10 points possible			
Goal	Cost Efficiency		
Objective	Ready to proceed immediately		
Measure 1	Project is in General Plan	0 or 2.5 points	
Measure 2	Project is part of a planning/environmental study	0 or 2.5 points	
Measure 3	Efforts underway to preserve the project's corridor	0 or 2.5 points	
Measure 4	Engineering or design work is complete	0 or 2.5 points	

CRITERIA 6. BENEFIT / COST RATIO – 15 points possible		
Goal	Cost Efficiency	
Objective	Considers cost effectiveness	
Phase 1 Measure	Benefit = (Phase 1 delay reduction) + (access to opportunity) + (urban form) + (multimodal) + (safety) + (Phase 1 asset management) + (freight) / 2015 Total Project Cost in millions	0 – 15 points
Phase 2 Measure	Benefit = (Phase 2 delay reduction) + (access to opportunity) + (urban form) + (multimodal) + (safety) + (Phase 2 asset management) + (freight) / 2015 Total Project Cost in millions	0 – 15 points

CRITERIA 7. SAFETY – 10 points possible		
Goal	Health, Safety & Security	
Objective	Mitigates safety issues	
Measure 1	UDOT's safety index average	0 – 10 points

CRITERIA 8. ASSET MANAGEMENT – 5 points possible			
Goal	State of Good Repair		
Objective	Mitigates deficient bridges		
Phase 1 Measure	Project replaces deficient interstate or national highway systems bridges based on bridge rating	0, 3 or 5 points	
Phase 2 Measure	Project replaces deficient interstate or national highway systems bridges based on bridge rating	0, 3, or 5 points	



TABLE 6 - 1 (CONTINUED)

CRITERIA 9. FREIGHT – 5 points possible		
Goal	Mobility & Accessibility	
Objective	Enhances Freight Centers and Connections	
Measure 1	Project connects to a freight center and/or is on the freight plan	0 or 5 points

network in order to determine the hours of delay per mile. Then, the travel time reduction was projected for 2034 socioeconomics of the volume hours of delay per mile on the projects needed in Phase 1 (the result of the first step). The sum of the delay for individual segments of each project was used to calculate the total delay for the project. Delay is calculated by taking the inverse of the PM peak speed from the model output and subtracting the inverse of the free flow speed, multiplied by the length of the project, multiplied by the PM peak period traffic volume. The total project delay was then divided by the project length to arrive at a score.

Scoring – Scores ranged from 0 to 25 points, where a score of 25 offered the most reduction in travel time.

Criterion 2 – Access To Opportunity

Five points were awarded to projects that improved access to low-income households, multiple-family dwelling units, and/or zero car households. Additionally, 5 points were awarded to projects that connected to major medical facilities and/or education centers. The trip origin data identified current low income households, zero car households, minorities, and multiple family housing units per acre by 2010 Census Track. The destination data identified current health care workers, projected 2024, 2034, and 2040 college enrollment by TAZ, and 2024, 2034, and 2040 total employment by TAZ. All the data sets were normalized: the origin data sets were normalized to the average minority density (largest average) and the destination data sets were normalized to the average employment density (largest average). After summing all the origin and destination data, all tract sums were factored in order to place the highest density origin and destination track as 100. Adjusted ranges, until distinct areas appeared, used greater than or equal to 15 for both sets. Google Earth was used to identify half mile radius circles around weighted centers for both origin and destination areas.

Scoring – A weighted raw score was established for each center based on the raw scored for each tract. Planners then estimated the proportion of each tract in each circle. If the project was within three-quarter mile of the origin then it received 5 points. If the project was within three-quarter mile of the destination then it received 5 points. Projects were awarded a score of 0,

5, or 10 points. A score of 10 had the most "access to opportunity."

Criteria 3 - Urban Form

Five points were awarded to projects that connected Wasatch Choice for 2040 centers or areas with increased housing and employment opportunities. Additionally, 5 points were awarded to projects that provided access or connection to infill areas and / or redevelopment areas. The "Metropolitan Centers," "Urban Centers", and "Town Centers" were identified from the Wasatch Choice for 2040 Vision. Other centers were designated by identifying TAZ's (households / acre) + (1.2 employment / acre), selecting areas that are at least a half mile wide, drawing half mile circles around all these centers, grouping all the TAZ's that are mostly within each circle, and identifying each land use center with a name. Additionally, 50-plus acre infill and / or redevelopment areas were identified using the Wasatch Choice for 2040 Vision and confirming that they have not been developed in recent years.

Scoring – If the project was within three-quarter mile to a Wasatch Choice for 2040 center, it received 5 points. If the project was within three-quarter mile of an infill or redevelopment area, it received 5 points. Projects were awarded a score of 0, 5, or 10 points. A score of 10 had the most access or connection to urban centers and redevelopment areas.

Criteria 4 - Multimodal

Projects that are coordinated with planned bicycle routes and / or transit facilities are awarded points. Also, highway projects that reference or have an active transportation and / or complete streets policy were awarded points.

Scoring – If a highway project included all or part of a bicycle lane that is identified on the 2011 Bicycle Map then it was awarded 1-2 points. If the project included all or part of a bicycle route that is identified as a UCATS priority bike route, then it was awarded 1-2 points. If the project corridor included all or part of a transit project identified in the 2015 – 2040 RTP, it was awarded 1-4 points. If a jurisdiction has an active transportation or complete streets policy, the project was awarded 1 point. Highway projects had the



opportunity to receive a score ranging from 0 to 10 points.

Criteria 5 - Project Readiness

Those highway projects that are ready to be constructed before other projects received more points. The WFRC staff delivered an electronic survey to all agencies and organizations with potential highway and transit projects on the 2015 – 2040 RTP. The survey asked representative of these agencies how soon they could begin and complete their project using the four measurements described below. Additionally, survey respondents were asked whether or not their project had an active transportation or complete streets policy in order to receive more points.

Scoring – If a highway project is identified in the jurisdiction's general plan, it was awarded 2.5 points. If the project is part of a planning or environmental study, it was awarded 2.5 points. If efforts are underway to preserve a corridor for the project, then it was awarded 2.5 points. Lastly, if the engineering or design work had been completed, it was awarded 2.5 points. Projects were awarded a score of 0, 2.5, 5, 7.5, or 10 points. A score of 10 was the most 'ready'.

Criteria 6 – Benefit / Cost Ratio

Projects were awarded up to 15 points depending on the extent to which the benefits outweighed the costs. The benefit was identified by adding the scores from the travel time reduction, access to opportunity, urban form, multimodal, safety, asset management, and freight together and then dividing this score by the 2015 – 2040 RTP total project cost.

Scoring – Projects were awarded a score that ranged from 0 to 15, where a project with 15 points would be the most beneficial in proportion to the cost.

Criteria 7 - Safety

Projects were awarded up to 10 points depending on their UDOT Safety Index score, which range in value from 1 to 10 points. The higher the index the greater the need or opportunity was to address safety concerns. New highway projects, those without a Safety Index score, were assigned the 80th percentile for like facilities.

Scoring – Projects were awarded a score that ranged from 0 to 10 points- a project scoring 10 points having the most potential to reduce crashes.

Criteria 8 – Asset Management

Projects were awarded 0, 3, or 5 points if they replace deficient Interstate or National Highway Systems bridges. Bridge deficiencies were identified using bridge ranking information provided by UDOT.

Scoring – Projects were awarded a score of 0, 3, or 5 points. For Phase 1 needs, a project awarded 5 points replaced a structure that had a rating between 50 and 80. Three points were awarded if the bridge rating was between 80 and 90 for the Phase 1 needs. Finally, Phase 2 projects received 5 points if their ratings were between 50 and 90.

Criteria 9 - Freight

Projects were awarded 5 points if they connected to one of the freight centers identified in <u>UDOT's Freight Plan</u>.

Scoring – Projects were awarded a score of 0 or 5 points. Projects that were awarded 5 points connected directly to an identified freight center.

Planning And Engineering Judgement

The highway evaluation criteria benefited from the WFRC staff's understanding of the need for a particular project, the staff's overall planning and engineering judgment, and sound regional knowledge and experience. Phasing considerations included input from the 2015 – 2020 TIP, the 2011 – 2040 RTP, local officials, the Regional Growth Committee's Technical Advisory Committees, and UDOT engineers from Region One and Two.

Ultimately, the 2015 – 2040 RTP did not rank projects but only placed them in phases. In establishing a phase for highway projects the WFRC weighed the results of the Congestion Management Program, the WFRC evaluation criteria results, and other project specific factors to derive an understanding of the relative value of each project in each phase. Financial constraints were then applied in order to place the highway projects into the three funded phases or the unfunded phase. The other factors taken into account while phasing projects included: connectivity, local and regional support and input, and UDOT support and input. Each of these scoring methods will be discussed independently.

In order to increase connectivity and support multi-modal projects, the WFRC staff worked internally to determine if the phase in which some highway and transit projects were placed could be adjusted to allow them to be put on the same construction schedule, or in the same phase.



Three screening factors used to identify coordination opportunities were: (1) are projects on the same street or crossing street; (2) are both projects in Phase 1 or 2; or (3) could the projects directly support one another. Table **7-3**, in the chapter titled Finalize Planned Projects, lists all highway projects by the three funded phases and the unfunded phase.

TRANSIT PROJECT SELECTION AND **PHASING**

As presented in the introduction to this chapter, transit and roadway projects identified as 2040 needs in the adopted preferred scenario were assigned to three funded phases, or time horizons, in the 2015 – 2040 RTP. Other highway and transit projects were assumed to be unfunded, based upon Regional priority and assumed funding availability. Determination of transit project phasing was based on adopted criteria and other factors including the following:

- Potential for joint roadway and transit projects;
- Phasing assumed in the 2011 2040 RTP,
- Collaboration with Utah Transit Authority and the Utah Department of Transportation; and
- Constructive dialog with stakeholders including local government officials and the general public

This section will discuss the process and criteria used for prioritizing transit projects, some of which parallels that of the highway prioritization process.

Transit Phasing Process

Transit projects fall into three main categories: line projects, point projects, and programmatic line items. Each of these three categories was assessed in a slightly different manner.

Line Projects – are defined as major transit improvements, which include a construction and operations element such as light rail, bus rapid transit or enhanced bus. Each segment in a transit line project, which are included in the Preferred Scenario, was individually assessed and then they were compared with other segments. This procedure allowed a single project identified in the Preferred Scenario to be placed in more than one phase, depending upon availability of funding and varying levels of productivity. For example, the SLC - Foothill Drive - Wasatch Drive Corridor was listed as a single project extending the length of the Salt Lake Valley. However, various project segments had very different

levels of productivity and readiness. Consequently this project was placed in the first and unfunded phase. Corridor preservation projects for rail and BRT lines thought to have separate transit rights-of-way were often placed in the first phase of the plan.

Point Projects – are major investments projects such as transit hubs, park and ride lots independent of a line project, and transit offices and vehicle maintenance facilities. Although many point projects were also assessed and compared to each other using the eight main transit criteria, great deference was given to the Utah Transit Authority's stated needs. The productivity of line and point projects were assessed for the beginning of the 2015 – 2040 RTP phase in which they were being considered. For example, ridership was assessed for each route segment for all RTP phases using the population and employment and highway network assumed to be in place at the beginning of that phase.

Programmatic Line Items – are projects representing funding for collective groups of similar projects which are of special interest to the Region although none of the individual projects are regionally significant. Two examples of programmatic lines items for transit are maintenance of assets and local bus and existing rail system service increases. These projects were not evaluated using the eight main criteria. However, but were funded based upon relevance to regional goals and the understanding of current needs. Some projects were not funded in the 2015 – 2040 RTP due to lack of current information. It is anticipated that they will be funded in the next 2019-2050 RTP.

Transit Phasing Criteria

The eight main criteria discussed below in Table 6-2. In the phase selection process, each of the main criteria and their sub-criteria are weighted. The total maximum possible score is 100. Many of these criteria are similar to those used in the 2011 - 2040 RTP.

Ridership

The ridership criterion is composed of two questions: "What is the corridor's demonstrated ability to support high frequency operations?" and "What is the forecasted number of transit riders using this project segment each day?" The Utah Transit Authority's service planners were utilized to ascertain a corridor's demonstrated ability to support a major transit investment. The planners drew upon their combined experience in rating each segment's potential to produce enough riders to support transit service with the same frequency, hours of service, and days



of service as an existing TRAX line. These planners thoroughly discussed each line corridor and collectively rated them a 1 to 10 scale.

A score of 10 was possible only if a particular corridor demonstrated a strong possibility to support with frequency, hours, and days of service similar to TRAX. These scores were factored to result in a high score of seven. The projected ridership for each transit segment was forecasted using the regional travel demand model. The regional travel model forecasted the total number of riders traveling through the segment (line load) on all the transit projects in each of the three phases. The forecasted scenario assumed only the availability of these transit lines without local bus service. This approach has several advantages over calculating segment boardings in a transit scenario that includes local bus. Among the advantages are the following:

- Using line load is like using traffic volume in that it accounts for a segment's use regardless of whether the trip originated from that segment or not;
- Consolidating the ridership from all the lines on the project segment accounts for the ability of one transit investment, a transit lane for example, to serve multiple lines; and
- Forecasting transit project ridership without local bus in the scenario eliminates the variable of local bus support for, or competition with, the proposed major transit investment when it is unclear how that local bus service will look in the future.

Air Quality

The Air Quality criterion is based upon a single question that drives the vast majority of the potential reductions of mobile emissions available through transit: "How many riders are forecasted to walk to

TABLE 6 - 2 SUMMARY OF TRANSIT PROJECT PHASING CRITERIA

MEASURES	DEFINITION*	WEIGHT	
Ridership	What is the corridor's demonstrated ability to support high frequency operations?	7%	
Ridership	What is the forecasted number of transit riders using this project segment each day?	13%	
Air Quality	How many riders are forecasted to reduce their car emission reductions by walking to this transit?*	10%	
Activity Center Support	How significant are the activity centers that this proposed transit is to serve?	10%	
Ladders of Opportunity	Does the project serve areas with large concentrations of disadvantaged people?	5%	
Ladders of Opportunity	Does the project link people to regionally significant job, education, and health care centers?	5%	
Transit User Delay Avoidance	How much total congestion delay will transit users on this project segment avoid?	5%	
Multi-modal Support	How much access to bike facilities will the project have?	3%	
тиши-точат Заррогс	Are the policies of sponsoring entity supportive of Complete Streets?	2%	
Cost Effectiveness	The composite cost score from the above criteria divided by the project capital cost.	30%	
	Is the project segment in the Municipalities' Planning Documents?	2.5%	
Project Readiness	Is there a completed corridor specific study for this project? **	2.5%	
	Is there a completed environmental study based upon an adopted planning study recommendation?	2.5%	
	Is land being preserved for this project segment in order to control costs?	2.5%	
*Walking or biking to transit can result in emission reductions of 80 percent as compared to 20% for driving to			

transit

^{**}Partial points are awarded for a study in process



this transit project segment?" The reason this question is so important is because the vast majority, up to 80 percent, of automobile emissions are emitted when the vehicle's engine is cold and the catalytic converter has yet to start working to its potential. Therefore, completely eliminating an automobile trip of any length provides the highest benefit. A walk to a transit station or stop is equivalent of walking and biking to transit because it is most easily forecasted.

Activity Center Support

Transit and activity centers are mutually supportive and can create a virtuous cycle resulting in benefits for the public. Transit supports higher density development because of its ability to transport many people to and from the center in a relatively small space. Transit can thrive in dense, multiple use centers because of the market potential that higher density provides and the greater ability patrons have to care for small errands without the use of single-occupant vehicles. This criterion asks, "How significant are the activity centers that this proposed transit is designed to serve?"

The location and regional significance of the activity centers served was assessed using a two-step process. Center locations were highlighted using a composite map of employment and households per acre. Employment density was weighted heavier by 20 percent to account for customer activity that frequently accompanies employment. Centers of one half mile or more were identified, and very large centers of one square mile or more were identified as two or more centers, even if contiguous. The regional significance of each center was measured based upon its 'market exposure,' which is a factor of both raw household and employment densities, and of intersection density. The greater the intersection density the more direct a walking path would be for patrons trying to access transit. Office employment was weighted more heavily in this calculation because of a greater propensity on the part of office workers to use transit. Undeveloped centers were assumed to have average intersection densities.

Ladders of Opportunity

Transit can service as the only way to reach economic and health care opportunities for the economically disadvantaged. Therefore, transit has been referred to in the US Department of Transportation as a <u>"ladder of opportunity."</u> The Ladder of Opportunity criterion is composed of two questions: "Does the project serve areas with large concentrations of disadvantaged people?" and "Does the project link people to regionally significant job, education, and

health care centers?" Areas with large concentrations of disadvantaged people were identified and scored using current densities of low income households, zero car households, minorities, and multifamily housing units. Regionally significant centers were identified and scored for this measurement based upon: (1) current health care workers to surrogate for health care opportunities; (2) forecasted public college enrollment; and (3) forecasted employment. Both disadvantaged neighborhoods and opportunity areas of one half mile or more were identified and very large areas of one square mile or more were identified as two or more areas even if contiguous. Also, for each of these areas, densities were normalized in order to not weight one of the factors higher than the others.

Transit User Delay Avoidance

Transit that can avoid roadway congestion can be a great benefit to its users. This criterion asks "How much total congestion delay will transit users on this project segment avoid?" This is a factor of how many users are forecasted for the transit project segment, if the project provides amenities such as a separate rightsof-way to avoid congestion, and how much congestion delay is forecast in that corridor. The Regional Travel Demand Model was used to forecast both ridership and roadway delay for the auto user in each of the phases.

Multi-Modal Support

Transit and bike facilities can create a virtuous cycle resulting in more transit use and more biking. Additionally, Complete Streets like policies and plans can yield direct and indirect benefits for transit. Direct benefits, such as Complete Street policies, can lead a city to plan ahead for transit, making it easier to construct. Indirect benefits include safer and more convenient opportunities for walking and biking to transit. The Multi-Modal Support criterion is composed of two questions: "How much access do bicycle facilities have to the project?" and "Are the sponsoring entities' policies supportive of Complete Streets?"

Access to bicycle facilities was determined by measuring the length of existing and UCATS proposed bicycle lane-like facilities within a half mile of the transit project segment, including parallel and crossing facilities. The amount of support provided by the sponsoring entity's policies was established based upon a survey administered to each of the Regions' planners. Survey questions solicited information regarding both direct support of active transportation and Complete Streets policies.



Cost Effectiveness

Cost effectiveness asks the question "How well are we employing scarce resources?" The 2015 – 2040 RTP recognizes the elasticity of transit revenue. Each project built and operated has an opportunity cost. That money cannot be used to build or operate other projects. The RTP is the only region-wide analysis of competing transit projects. This score was calculated using the sum of the above criteria divided by the project capital cost to determine ranking.

Project Readiness

Project Readiness asks the following questions:

- Is the project segment in the municipalities' planning documents? In other words, 'is the sponsoring entity preparing for the project?' The project is less likely to have opposition if it has been on local general plans for a considerable length of time. As new property owners come into the area, they will know that a project is being planned and sensitive land uses can be steered away from properties adjacent to the project.
- Is there a completed corridor specific study for this project? And, is there a completed environmental study based upon an adopted planning study recommendation? In other words, is there official consensus in support of the project is and how detailed are the project plans? The more detailed the project plans the more likely the sponsor is to implement it. For example, the more firm the plans for a transit station are, the more likely it is that local government officials will permit higher densities next to proposed sites, that building openings will be properly oriented to the future station, and that sidewalks and bicycle lanes will compliment them. All these actions improve ridership and increase the likelihood that the project could receive adequate federal funding.
- 'Is land being preserved for this project? A project is likely to be less expensive when the right-ofway is being preserved, developers are active participants in accommodating the project, and local governments and UDOT are considering the ultimate needs for transit when infrastructure is constructed in the corridor. Proper placement of utilities within a corridor can save as much as 20 percent of the construction costs of light-rail transit.

Need Scores And Findings

As is the case with the highway projects, the 2015 – 2040 RTP did not ultimately rank transit projects but only placed them in phases or construction "time frames." These scores were used as guidelines and many other considerations were also factors in the phasing decisions. Chief amongst the other considerations was funding availability and regional significance. Points for projects such as, transit hubs and park- and-ride lots were assessed separately because the evaluation criteria seemed to favor them. The total scores for each of the assessed projects are found in Appendix K, entitled "Transit Evaluation And Criteria."

NON-MOTORIZED SELECTION CRITERIA

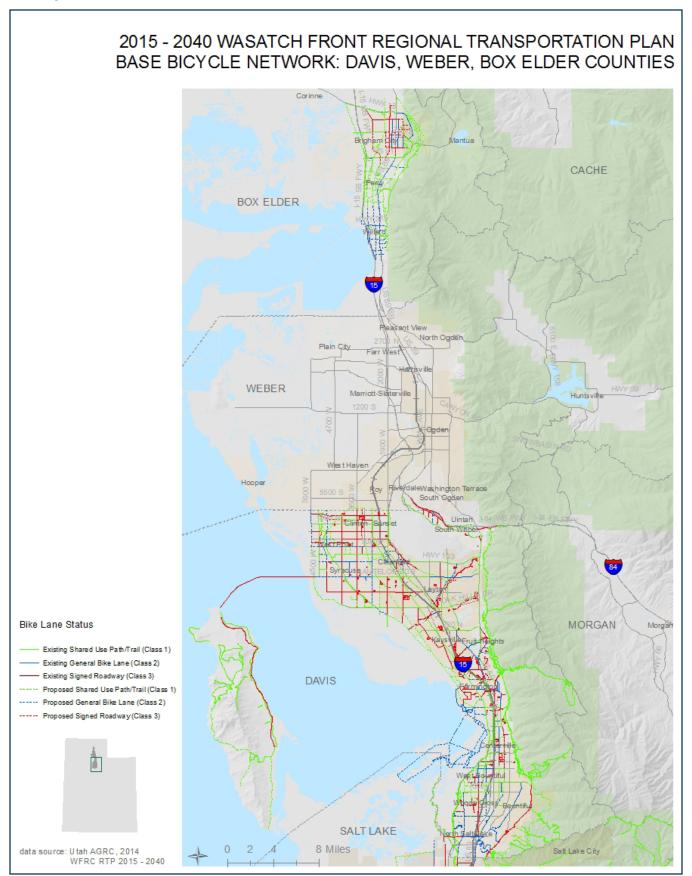
The 2015 – 2040 RTP has two distinct bicycle plans that address the needs of active transportation, a Regional Priority Bicycle Network and a Bicycle Base Network. The process to develop and select these routes and connections is extensive with numerous stakeholder involvement, analysis and collaboration.

The 2040 Bicycle Base Network

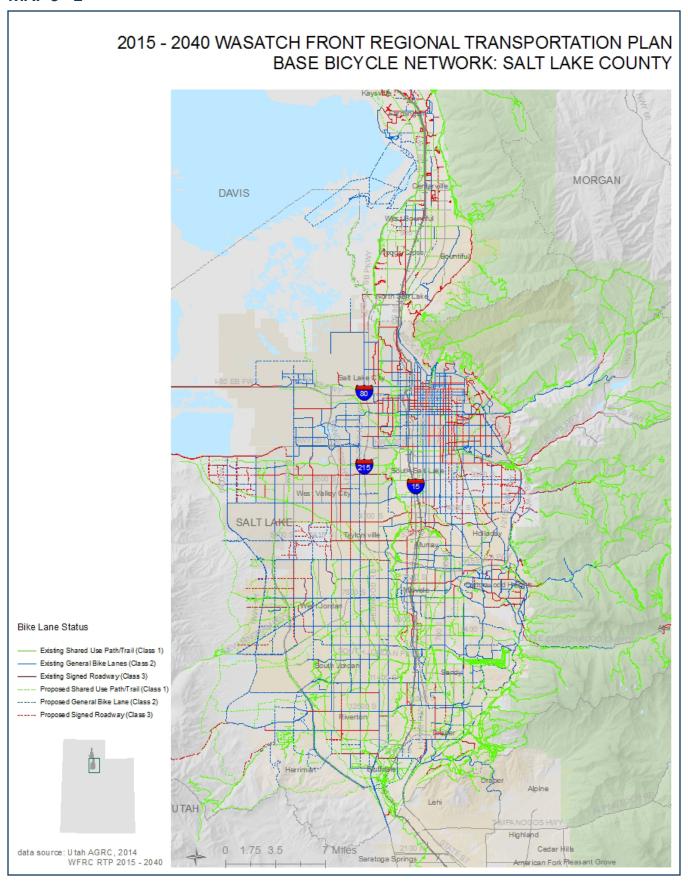
The Bike Base Network includes both the existing and proposed routes for both on and off street connections throughout the Wasatch Front. The bicycle base network looks to be an inclusive plan for all users ranging from recreation to commuter users by all non-motorized type of transportation. This regional network looks to include encompass all connections adopted by local governments and plans adopted by respective counties. This network demonstrates the local needs and also highlights the regional significance to the overall network.

To develop this network, WFRC worked with every County to reach out and get updates or newly created networks from every municipality within the jurisdiction. For Box Elder County, the urban planning group called Box Elder Planning Association (BEPA), consisting of all the urban planners in Box Elder and Ogden Layton Urbanized area provided updates and guidance on the routes to include in this base network. Within Weber County, a technical group called the Weber Active Transportation Committee provided updates and reviewed the network under the direction of Weber County. In Davis County, the Davis County Active Transportation Committee provided trail and on street updates to both the County and WFRC. For Salt Lake County, through the Planners Technical Advisory Committee, (PlanTAC) formerly known as the County Cooperative Plan Meetings updates were given. Municipal and county governments in Salt Lake, Davis, and Weber Counties through their respective trails and bicycle committees have reviewed and updated

MAP 6 - 1



MAP 6 - 2





the previous bike plans. Locations of TRAX stations, FrontRunner stations, future transit stations, and major college or university campuses have been were also taken into consideration so that routes needed to reach these destinations were identified. Additional updates to this network were also given by the Regional Growth Committee Technical Advisory Committee (RGC TAC) meetings. This completed network are shown on Map 6-1 and Map 6-2.

The 2040 Regional Priority Bicycle Network

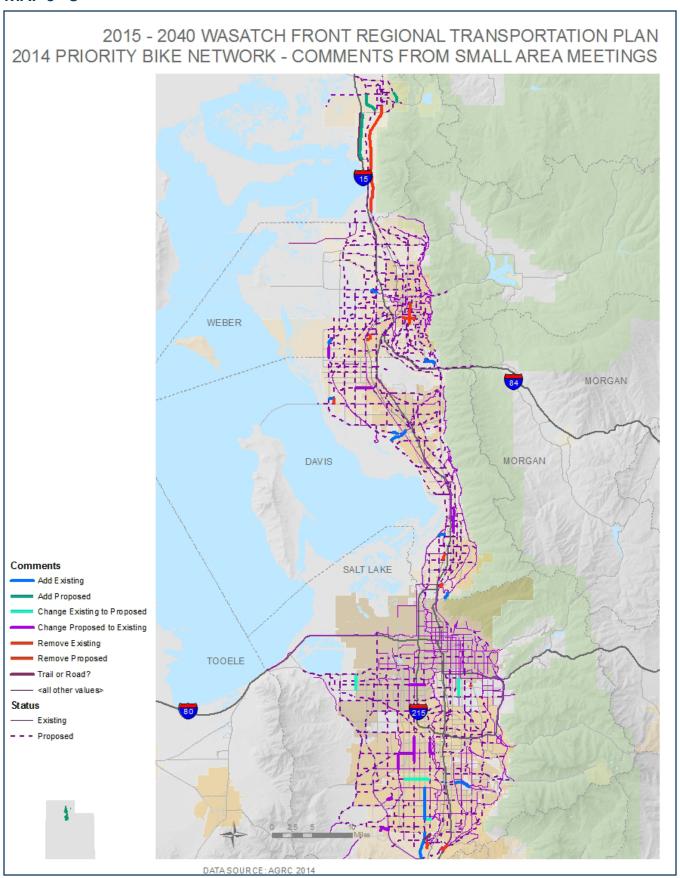
In previous plans, WFRC has identified a priority network for active transportation, but this is the first time the WFRC priority plan has been the same as numerous partner agencies. This collaboration was a result of Utahns, planners, elected officials and many other key leaders in the region vocalizing the need for a distinct and unified regional priority bicycle network. Therefore representatives from the Utah Department of Transportation (UDOT), the Utah Transit Authority (UTA), the Mountainland Association of Governments (MAG), Salt Lake County, Davis County, Box Elder County, Weber County, and the Wasatch Front Regional Council (WFRC), came together for a vertical collaboration of a priority network called the Regional Priority Bicycle Network. This network was originally born out of the work completed from the Utah Collaborative Active Transportation Study (UCATS).

This study began in 2012, built upon previous WFRC RTP Priority Bicycle networks and began under the premise that a multi-agency priority network would lay the groundwork for criteria and establish a regional systematic approach to prioritize bicycle routes. The main objective for the priority route would propose ways to connect pedestrian and bicycle infrastructure to transit and continue to enhance the existing regional network. The goals of the selection criteria when establishing the priority network included demonstrating quality of life benefits, enhance connections to fixed rail transit, and lay the foundation for a regional bike network. The collective group of agencies developed two tiers of project selection criteria to identify the goals of this network. Tier one criteria: took into account the existing urban bike network and the opportunities to enhance active transportation connections to fixed rail transit. The secondary criteria of for selecting projects including a Tier two criteria analysis, consisting of the Latent Demand Modal, capturing the "interested but concerned cyclists," the route was proposed on existing local or regional plans, and if this project would hold economic development or significance.

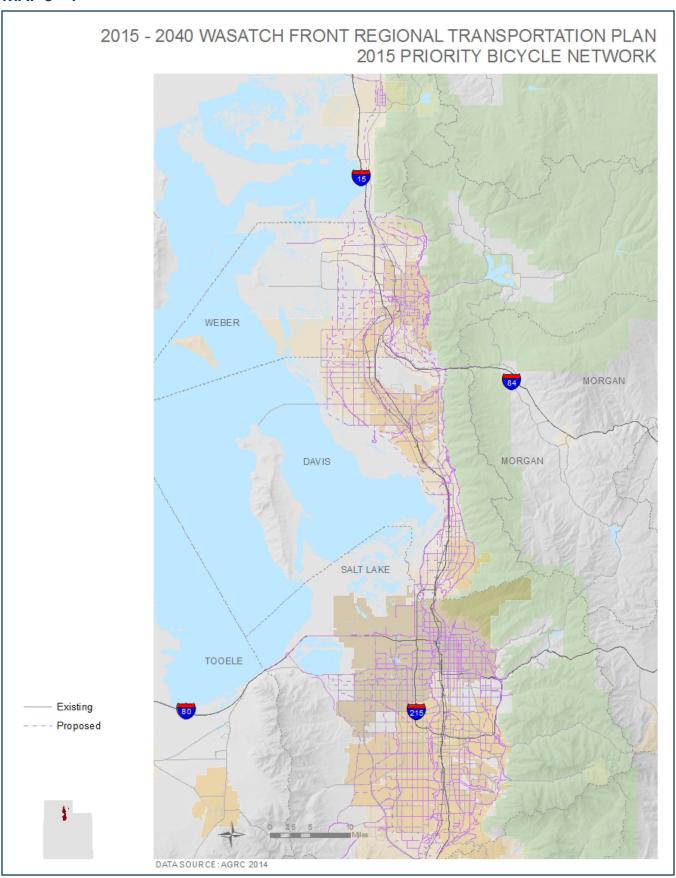
This draft network was developed in 2012, which WFRC took the initial recommended priority network to key stakeholders and the to all local government members along the Wasatch Front. The work since then includes the extensive approach WFRC did to the update to these two networks to reflect the needs of all local government members in the region. Through the series of three small area meetings, which included representatives from all local governments and county staff, the WFRC staff received numerous comments and updates to many segments of the network, which are shown on Map 6-3. WFRC staff worked closely with County representatives to make recommended updates to the Regional Priority Network. A proposed update was recommended positively based on how it evaluated to this criteria 1. The regional significance of the segment to the overall network, 2. If the segment enhanced or made additional connections to transit and 3. Was on the County base bike network, simplified an adopted trail by a community. All these final updates were then taken to the agencies involved in the regional priority plan. If one of the proposed updates was on a UDOT state road, it was taken to the respective UDOT Regions to review. The recommendations pulled all together create the completed 2040 Regional Priority Bicycle Network, shown on Map 6-4. This extensive and inclusive process was necessary for this network to reflect all the needs of every agency and to have a comprehensive Regional Priority Bike Network.

The WFRC recognizes that the 2015 – 2040 RTP will be revisited in four years, although updates may take place at earlier dates. The updated Salt Lake County map can be found at www.slco.org, an updated Davis County map can be found at www.daviscountyutah.gov, and an updated Box Elder County map can be found at http:// www.boxeldercounty.org and an updated Weber County map can be found at www.co.weber.ut.us.

MAP 6 - 3



MAP 6 - 4





FINALIZE PLANNED PROJECTS

Finalize and adopt the plan, based on the extensive analysis and stakeholder feedback garnered throughout the process.

INTRODUCTION

The purpose of the 2015 – 2040 RTP is to document a comprehensive list of planned improvements to the regional transportation system designed to meet the travel needs of Wasatch Front Region residents for the next 26 years. The planning process evaluated longrange capacity needs and developed a list of planned highway, transit, and other improvements needed by the year 2040. The process considered the Wasatch Front's travel demand, examined various transportation alternatives, designated transportation improvements, and provided proper construction phasing. The 2015 – 2040 RTP relied on extensive public review and input that helped generate recommended projects that can be implemented using estimated available funding between 2015 and 2040. The 2015 – 2040 RTP also recommends general policies for transportation systems, enhancements, regional freight movement, bicycle routes, pedestrian amenities, multi-purpose trails, safety, and homeland security.

OVERVIEW OF PLANNED IMPROVE-MENTS

As part of the 2015 – 2040 RTP process, the WFRC staff developed, refined, and modeled four land use and transportation scenarios. These scenarios helped identified needed capacity improvements for the Wasatch Front Region's highways, arterial streets, and transit network. The <u>preferred scenario</u> also helped form the basis for the recommended transportation improvements found in the draft 2015 – 2040 RTP. Once the preferred alternative was selected, as discussed in the chapter titled Create and Evaluate Scenarios, the WFRC staff further refined recommended improvements to the region's transportation system by selecting those projects that best meet projected travel needs. This planning process focused on individual highway and transit projects, their type, length, width, class, phasing, technology, corridor alignment, station spacing, and other important characteristics.

On December 18, 2014, the WFRC staff presented the 2015 – 2040 RTP phased highway and transit projects lists, along with corresponding maps and other documentation, to the Wasatch Front Regional Council for review and comment. Project lists and maps were also distributed to other elected officials, regional planners and engineers, and interested members of the general public. Briefings on the draft 2015 – 2040 RTP projects were presented to the <u>WFRC Transportation Coordination</u> Committee and its Technical Advisory Committees, the Regional Growth Committee and its Technical Advisory Committees, the Salt Lake, Davis and Weber County Councils of Governments, and individual city planners and engineers. As a result of this effort, the WFRC staff received comments regarding the recommended capacity improvements for the highway and transit networks. In a number of cases, changes to the phased 2015 – 2040 RTP projects list and maps were made to include facilities that are felt to be needed as part of the region's overall plan.

Central Corridor Study

The Wasatch Front Central Corridor Study is a collaborative effort among the <u>Utah Department of Transportation</u> (UDOT), <u>Utah Transit Authority</u> (UTA), <u>Wasatch Front Regional Council</u> (WFRC) and the <u>Mountainland Association of Governments</u> (MAG). The study will produce potential transportation solutions for the I-15 and FrontRunner corridor between now and 2050. Results will be incorporated into the 2019 – 2050 Regional transportation plans of WFRC and MAG.

The primary study area extends north to south from Southern Davis County to Northern Utah County. East and west, the study area extends along I-15 approximately three to four miles wide (Redwood Road to 700 East). The study area links the majority of the state's population, as well as the majority of car, transit and freight traffic. Beyond the primary study area, the study team will also consider the larger region's influence on and benefit from potential transportation solutions. The study team is seeking to produce an integrated transportation solution. This means the study will evaluate all potential strategies. That includes transit, roadway, operations, policy, active transportation and connectivity (meaning freeway-

surface street, transit-roadway and transit-pedestrianbike connectivity).

Highway Improvements

Programmed highway improvements in the 2015 – 2040 RTP include a balance of freeway, highway, arterial and collector road projects. The projects add needed capacity through the construction of new facilities or the widening of existing roads. Two new freeways are planned: the Mountain View Corridor and West Davis Corridor. One principle arterial is proposed to be converted to a freeway – the Bangerter Highway. These large scale projects will help offset the growing travel demand throughout the Region. The need for approximately 182 miles of additional capacity on existing freeways, such as I-15, SR-201, I-215, I-80, and US-89 is also recognized and addressed.

The 2015 – 2040 RTP includes new or expanded arterial streets and freeway improvements required to serve the existing and developing areas of the Wasatch Front Region. Approximately 592 miles of capacity improvements are proposed for construction over the next 26 years. Highway facilities that will be constructed or improved include approximately 182 miles of freeway, 185 miles of principal arterials, 95 miles of minor arterials, and 129 miles of collector roads. Major projects in the 2015 – 2040 RTP include the construction of the West Davis Corridor through Davis and Weber Counties, the widening of US Highway 89 in Davis County, improvement of portions of I-15 in Salt Lake, Davis, and Weber Counties, the completion of the Mountain View Corridor in Salt Lake County, and the reconstruction of I-80 from 1300 East to the mouth of Parleys Canyon. Due to financial constraints, not all of the new capacity projects recommend for construction by 2040 can be met by the 2015 – 2040 RTP. However, by identifying expected highway revenue and expected construction and maintenance costs, the WFRC staff has developed a list of new capacity highway projects for which funding will likely be available beginning in 2015 and continuing through 2040.

Transit Investments

The 2015 – 2040 RTP first assumes the funding of UTA's Transit Development Program (TDP) which includes costs such as the continuation of current services, maintaining current facilities, continued payment of debt service for existing facilities and some additional minor projects and studies in the region. Collectively these costs amount to about 68 percent of all 2015-2040 costs. The transit improvements beyond UTA's TDP comprise the 2015 -

2040 RTP. Programmed in the 2015 – 2040 RTP is a mix of funding for local bus and existing rail service expansions, and major transit projects. These represent 6 percent and 26 percent of all 2015 – 2040 transit funding respectively and are intended to improve reliability of service, hours of service, days of service, and service coverage in the region. The transit facilities that will be constructed include approximately \$1 billion for local bus and existing rail service expansions, \$1 billion for Enhanced Bus projects, \$1 billion for rail projects and \$2 billion for Bus Rapid Transit projects.

Highway And Transit Project Phasing

In the spring of 2014, the RGC and the WFRC reviewed and approved specific evaluation criteria for the phasing of recommended projects. These criteria were used to evaluate and rank each project and help identify their proper phase in the RTP. A detailed overview of the criteria for highway projects included (1) travel time reduction, (2) access to opportunity, (3) urban form, (4) multimodal use, (5) project readiness, (6) benefit / cost ratio, (7) safety, (8) asset management, and (9) freight. In addition to the criteria referred to above, transit projects also took into consideration current ridership, forecasted ridership, and air quality. Other important phasing considerations for both highway and transit projects included whether or not the project is part of the current 2015 – 2020 Transportation Improvement Program (TIP), the previous <u>2011 – 2040 Regional Transportation</u> Plan; and input received from local officials, UDOT and UTA representatives, and Technical Advisory Committee members. Finally, ranked highway and transit projects were placed into one of four different implementation phases. These phases coincide with the availability of anticipated financing and revenue sources and are listed below:

- Phase 1 2015 to 2024 Phase 2 2025 to 2034 Phase 3 2035 to 2040
- Unfunded Beyond 2040 (Projects lacking a confirmed funding source)

During January and February of 2014, a series of small area meetings were held in which the WFRC staff focused on further refining recommended highway and transit projects with input provided by local planners, engineers, elected officials, and the general public. The 2015 – 2040 RTP was developed within the constraints of financial feasibility. Thus, the list of highway and transit facility improvements contains only those projects that can be realistically funded over the next 26 years. Reasonable assumptions were made concerning both future revenues

for transportation improvements and the estimated costs of programmed highway and transit facilities as discussed in the chapter titled <u>Assess Financial Considerations</u>.

PROJECTS COMPLETED OR UNDER **CONSTRUCTION**

During the four years since the previous RTP was adopted in 2011, a number of regional highway projects have been completed, deleted or are currently under construction. Highway improvements and new construction projects within the Wasatch Front Region that have been completed, deleted, modified, or are currently under construction are listed in Table 7-1.

HIGHWAY PROJECTS COMPLETED, DELETED OR UNDER CONSTRUCTION FROM THE 2011-2040 RTP **TABLE 7 - 1**

ID#	PROJECT	DESCRIF	PTION	STATUS
Salt La	ke County, East-West Facilities			
S-2	700 South / 500 South	Widening: 2 to 4 lanes	COL / 3.6 miles / Local	Deleted
	5600 West to 2700 West	ROW: 2007 - 50 ft / 2040 - 99 ft	Bike Class: 2	
S-16	4700 South	Widening: 2 to 4 lanes	PA/ 1.0 miles / Local	Deleted
	6400 West to 5600 West	ROW: 2007 – 80 ft / 2040 – 110 ft	Bike Class: 3	
S-23	5400 South	Operational	MA / 2.3 miles / UDOT	Completed
	5600 West to Bangerter Highway		Bike Class: Priority 2 and 3	
S-27	6200 South	Widening/New Construction: 2/0 to 4	MA / 0.3 miles / Local	Under
	Mountain View Corridor to 5600 West	ROW: 2007 - 0 ft / 2040 - 110 ft	Bike Class: 2	Construction
	11400 South	Widening: 2 to 4 lanes	MA / 1 miles / Local	
S-43	11800 South / 5600 West to Valdania Street	ROW: 2007 - 80 ft / 2040 - 110 ft	Bike Class: Priority 2	Deleted
	(5200 West)			
S-44	11400 South	Widening: 4 to 6 lanes	MA / 4.7 miles / UDOT	Deleted
	Bangerter Highway to I-15	ROW: 2007 - 106 ft. / 2040 - 123 ft	Bike Class: Priority 2	
S-51	13400 South	Widening: 4 to 6 lanes	COL / 1.7 miles / Local	Completed
	Mountain View Corridor to Bangerter Highway	ROW: 2007 - 66 ft / 2040 - 100 ft	Bike Class: 2	
S-176	13400 South	New Construction: 0 to 2 lanes	Collector / 0.6 miles / Local	Deleted
	7300 West to 6700 West	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: None	
S-50	13400 South	Widening: 2 to 4 lanes	Minor Arterial / 1.0 miles / Local	Deleted
	6400 West to 5600 West (Rosecrest Road)	ROW:2015 - 66 ft. / 2040 - 110 ft.	Bike Routes: Priority	
S-52	Juniper Crest	New Construction: 0 to 6 lanes	Collector / 0.9 miles / Local	Under
	4800 West to Mountain View Corridor	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: Priority	Construction
S-53	Juniper Crest	New Construction: 0 to 2 lanes	Collector / 0.5 miles / Local	Under
	Mountain View Corridor to 4570 West	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: Priority	Construction
Salt La	ke County, North-South Facilities			
S-59	7200 West	Widening: 2 to 4 lanes	MA / 2.5 miles / Local	Completed
	SR-201 to 3500 South	ROW: 2007 - 66 ft. / 2040 - 86 ft.	Bike Class: 3	
S-62	Mountain View Corridor	New Construction: 0 to 4 lanes	PA / 2.2 miles / UDOT	Under
	4100 South to 5400 South	ROW: 2007 - 0 ft. / 2040 - 328 ft.	Bike Class: Priority 1	Construction
S-63	Mountain View Corridor	New Construction: 0 to 4 lanes	PA / 14.4 miles / UDOT	Completed
	5400 South to Redwood Road	ROW: 2007 - 0 ft. / 2040 - 328 ft.	Bike Class: Priority 1 and None	



Weber	County, East-West Facilities			
W-11	2550 South	Widening: 2 to 4 lanes	COL / 3 miles / Local	Deleted
	I-15 to 3500 West	ROW: 2007 - 60 ft / 2040 - 86 ft	Bike Class: Priority 3	
W-16	Riverdale Road (SR-26)	Widening: 4 to 6 lanes	PA / 1 miles / UDOT	Completed
	1900 West (SR-126) to I-84	ROW: 2007 - 99 ft / 2040 - 120 ft	Bike Class: 3	
Weber	County, North-South Facilities			
W-23	4700 West	Widening: 2 to 4 lanes	MA / 3.8 miles / Local	Deleted
	1200 South to 4000 South	ROW: 2007 - 82 ft / 2040 - 110 ft	Bike Class: 1, 2, and None	
W-31	600 West	Operational	COL / 0.9 miles / Local	Completed
	Elberta Drive to 2600 North		Bike Class: 3	
	Adams Avenue	Widening: 2 to 4 lanes	MA / 0.6 miles / Local	
W-32	US-89 / Washington Boulevard to Washington	ROW: 2007 - 86 ft / 2040 - 99 ft	Bike Class: None	Completed
	Terrace City Limits			
Weber	County, Spot Facilities			
W-42	I-15 Interchange	Upgrade	FWY/UDOT	Completed
	@ Riverdale Road (SR-26)		Bike Class: None	



Transit

In a similar manner to the highways projects listed in **Table 7-1**, the status of several of major transit projects recommended in the previous <u>Regional Transportation</u> Plan: 2011 – 2040 have changed. Table 7-2 lists the transit projects from the 2011 – 2040 RTP that have been complete, have been deleted, or significantly modified in the 2015 – 2040 RTP. Many other projects have been modified in terms of the extent and location of Enhanced Bus (BRTI) versus Bus Rapid Transit (BRTII), the BRT/ Rail designation has been eliminated in favor of a more specific designation, or their phase of construction has changed. Additionally, the 2011 – 2040 RTP assumed that many project would be incrementally built. This Plan does not assume that this will be the case. These types of changes are not included in the chart. Changes to the project alignment or mode are only shown if they significantly change the nature of the project.

COUNTY	PROJECT	DESCRIPTION
Salt Lake	1300 East Corridor	Significant modification to the alignment on the south end
Salt Lake	State Street Corridor	Segment south of South Towne unfunded
Salt Lake	Draper TRAX Extension to Draper Town Center	Completed
Salt Lake	Draper TRAX Extension to Utah County	Unfunded
Salt Lake	Redwood Road Corridor	Significant modification to the alignment on the south end
Salt Lake	5600 South Corridor	Truncated alignment on the north end,
Salt Lake	Mid-Jordan Corridor	unfunded
Salt Lake	3300 South / 3500 South Corridor	Eastern half realigned
Salt Lake	4500 South / 4700 South Corridor	Eastern segment unfunded
Salt Lake	Cottonwood Kearns Corridor (approx., Ft. Union-7000 South)	Western portion unfunded
Salt Lake	East Sandy / Daybreak Corridor (approx 9400 South – 10600 South)	Unfunded
Salt Lake	Draper Town Center – Riverton Corridor (approx 12600 South)	Unfunded

Committed Projects

Projects identified in the 2015 – 2040 RTP are implemented through the programming of federal, state, local, and other highway and transit funds as part of the annually updated Transportation

Improvement Program (TIP) process. The TIP is a short-range, six year plan that directly matches funding sources with Phase 1 projects, as well as other smaller projects that do not require inclusion in the RTP. During the TIP development process, projects from the current RTP are evaluated, along with projects from various management systems, such as pavement and congestion management systems. As part of the TIP process, the State Air Quality Implementation Plan (SIP) is reviewed for recommended Traffic Control Measures.

Eligible projects are identified for each of the highway and transit funding categories. Projects are evaluated and priorities are set within each funding category. The projects receiving the highest priority within each category are then combined to form the TIP. The WFRC, in consultation with UDOT and UTA, is responsible for developing the Salt Lake City — West Valley City Urbanized Area and the Ogden- Layton Urbanized Area Transportation Improvement Programs.

The current 2015 – 2020 TIP is a compilation of prioritized projects for which funding has been

committed from various federal, state, and local programs. The goal is to involve all the municipalities and counties in the urbanized portion of the Wasatch Front Region, as well as the UDOT and UTA. Projects included in the TIP will implement proposed improvements in the 2015 – 2040 RTP, helping to satisfy short range needs of both Urbanized Areas, and provide for the maintenance, operation and preservation of the existing transportation system.

HIGHWAY SYSTEM IMPROVEMENTS

The 2015- 2040 RTP includes both new or widened freeway and arterial streets throughout the Wasatch Front region. The region's two major metropolitan centers of Salt Lake City and Ogden City attract a growing number of work, shopping and entertainment related trips originating in Davis County. Travel between Salt Lake City and Ogden City is channeled through a geographically constrained area bordered by the Great Salt Lake on one side and the Wasatch Mountains on the other. Salt Lake, Davis and Weber Counties continue to experience considerable population growth and the need for improved north-south transportation capacity will become more apparent over the next 26 years. Upgrades of existing highways and the construction of new facilities will be needed to meet anticipated demand.



2015-2040 HIGHWAY FINANCIALLY CONSTRAINED AMOUNTS

CAPACITY (NPV)						
State Roads	2015-2024	2025-2034	2035-2040	Unfunded	2015 - 2040	
Revenues	2,835,461,068	2,783,600,712	1,774,517,438		7,393,579,218	
RTP Projects	2,833,084,947	2,774,243,976	1,773,574,221	1,719,363,947	9,100,267,091	
Unfunded Capacity Needs	2,376,121	9,356,736	943,217	(1,719,363,947)	(1,706,687,873)	
Local Roads of Regional Significance	2015-2024	2025-2034	2035-2040	Unfunded	2015 - 2040	
Revenues	812,439,796	978,853,098	619,378,919		2,410,671,813	
RTP Projects	847,343,256	940,835,712	633,660,400		2,421,839,368	
Unfunded Capacity Needs	(34,903,460)	38,017,386	(14,281,481)		(11,167,555)	

The 2015 – 2040 RTP is financially constrained making reasonable assumptions on existing and new revenue, noted in the chapter titled <u>Assess Financial</u> <u>Considerations</u>. Table 7-3 represents the financial constraint, revenues and costs for state roads and local roads of regional significance by phase in current dollars.

Highway Projects List

The 2015 – 2040 RTP's Highway Project List identified segments of corridors which will require new construction, widening or upgrades, or operational improvements. Each project description includes the project number, project name, project length, the type of improvement, number of lanes, current right-of-way width, proposed 2040 right-of-way width, functional classification, length of improvement, category of bicycle improvement, facility owner, when the project is needed, financially constrained phase, current cost, and phased cost. The 2015 – 2040 RTP Highway Projects List is shown as **Table 7-4**.

Highway Project And Phasing Maps

The 2015 – 2040 RTP identifies highway improvement projects that increase capacity to meet travel demand by either adding new travel lanes to existing roadways or through the construction of new highways. Highway improvements fall into one of three categories. Highway improvement projects with identified funding sources that will best satisfy the Wasatch Front Region's immediate travel demand, are scheduled in Phase 1, or the time period between the years 2015 and 2024. Phase 2 highway projects and improvements are those scheduled between 2025 and 2034. Finally, Phase 3 improvements are proposed for constructed between 2035 and 2040. Phase 1 highway improvements include projects listed on the current Wasatch Front Regional Council's Transportation Improvement Program for 2015 - 2020. Phase 2 and Phase 3 projects also have identified funding sources. Recognizing that a financially constrained plan will not address all new capacity needs, the federal reauthorization act, entitled MAP-21, allows for illustrative or non-funded projects and facilities to be identified in regional transportation plan documents. Unfunded projects, shown as grey lines on the map, represent proposed facilities that meet identified regional travel demand needs, but remain unfunded for the period of 2015-2040. The 2015 RTP would include these highway projects if adequate funding sources could be identified. Highway projects in the Ogden / Layton Urbanized Area are graphically illustrated by types of improvement on Map 7-1, and by project implementation phase on Map 7-2. The recommended highway improvements for the Salt Lake / West Valley Urbanized Area are shown on Map 7-3 and the phasing of these projects can be found on Map 7-4.

Future Right-Of-Way Map

The 2015- 2040 RTP also identified a future right-of-way street and highway system that will serve the anticipated travel demand of the Wasatch Front Region beyond the year 2040. The comprehensive plans of individual municipalities and counties along the Wasatch Front were gathered and reviewed to obtain information concerning existing and future highway and street networks within their jurisdictional boundaries. This information was compiled and mapped by the WFRC staff and presented in graphical form. The 2015-2040 RTP includes recommendations of future right-of-way widths for all existing and proposed freeway, principal arterials, minor arterials, and collector streets. Recommended right-of-way widths vary from community to community and are shown as a range. For example, principal arterials are identified as facilities that will eventually be widened to widths of 126 to 150 feet. The Wasatch Front's future right-of-way information is presented on Map 7-5.

Highway Functional Classification Map

The 2015- 2040 RTP's "Wasatch Front Urban Area Future

Functional Classification," shown as Map 7-6, graphically illustrates the Wasatch Front Region's (1) freeways, (2) principal arterials, (3) minor arterials, and (4) collector streets. Freeway systems are the largest traffic facilities built with complete control of access and high design speeds and provide the greatest mobility for regional traffic. Principal arterial streets serve the major centers of activity of a metropolitan area and the longest projected trips. Minor arterials interconnect with and augment the urban principal arterial system and provide for trips of moderate length at a somewhat lower level of travel mobility than principal arterials. These facilities place more emphasis on land access to adjoining or nearby properties than freeways or major arterials, and offer

movement within communities. However, ideally they should not penetrate identifiable neighborhoods. Finally, collector streets provide for both land access service and movement for local traffic within residential, commercial, and industrial areas. This particular road classification may penetrate neighborhoods distributing trips form arterial streets through developed areas to ultimate destinations. Conversely, collector roads can also be expected to collect traffic from local streets and channel it onto the arterial system. Appendix L entitled, "Street Functional Classification" provides a more complete description of various highway and street classification types.

TABLE 7 - 4 2015-2040 RTP HIGHWAY PROJECT LIST

				PHASE 1: 2015-2024	
				PHASE 2: 2025-2034	
ID#	PROJECT	DESC	RIPTION	PHASE 3: 2035-2040	COST
				Unfunded (U))	
SALT	LAKE COUNTY, EAST-WEST FACILIT	IES			
S-1	Sports Complex Boulevard (2400 North)	New Construction: 0 to 2 lanes	Collector / 0.5 miles / Local	Needed Phase - 1	2015 - \$4,400,000
	I-215 East Frontage Road to Redwood Road	ROW:2015 - 0 ft./2040 - 66 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$5,300,000
S-3	California Avenue	Widening: 2 to 4 lanes	Minor Arterial / 1.3 miles / Local	Needed Phase - 3	2015 - \$10,000,000
	Mountain View Corridor to 4800 West	ROW:2015 - 110 ft./2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 3	Phased - \$24,700,000
S-4	I-80	Widening: 6 to 8 lanes	Freeway / 3.3 miles / I-80	Needed Phase - 2	2015 - \$181,500,000
	1300 East to I-215 (East)	ROW:2015 - 328 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$326,900,000
S-5	I-80	Widening: 3 EB to 4 EB lanes	Freeway / 8.0 miles / I-80	Needed Phase - 1	2015 - \$36,900,000
	I-215 (East) to Lambs Canyon	ROW:2015 - 328 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$44,900,000
S-6	2100 South	Operational	Minor Arterial / 2.6 miles / Local	Needed Phase - 1	2015 - \$6,500,000
	I-15 to 1300 East	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Base	Funded Phase - 2	Phased - \$11,700,000
S-7	SR-201	Widening: 4 to 6 lanes	Freeway / 9.0 miles / SR-201	Needed Phase - 2	2015 - \$198,000,000
	I-80 (West) to SR-111 Bypass	ROW:2015 - 300 ft. / 2040 - 300 ft.	Bike Routes: None/Priority	Funded Phase - 2	Phased - \$356,600,000
S-8	SR-201	Widening: 4 to 6 lanes	Freeway / 4.6 miles / SR-201	Needed Phase - 2	2015 - \$101,200,000
	SR-111 Bypass to Mountain View Corridor	ROW:2015 - 300 ft. / 2040 - 300 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$182,300,000
S-9	SR-201	Widening: 6 to 6+HOT lanes	Freeway / 6.0 miles / SR-201	Needed Phase - 1	2015 - \$132,000,000
	Mountain View Corridor to I-15	ROW:2015 - 300 ft. / 2040 - 300 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$237,700,000
S-164	2400 South	New Construction: 0 to 2 lanes	Collector / 0.5 miles / Local	Needed Phase - 2	2015 - \$6,100,000
	7200 West to 6750 West	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: Base	Funded Phase - 2	Phased - \$11,000,000
S-165	2400 South	New Construction: 0 to 2 lanes	Collector / 1.3 miles / Local	Needed Phase - 1	2015 - \$15,900,000
	6400 West to 5600 West	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None/Base/Priority	Funded Phase - 1	Phased - \$19,400,000
S-166	2400 South	New Construction: 0 to 4 lanes	Collector / 0.5 miles / Local	Needed Phase - 2	2015 - \$6,100,000
	3200 West to 2700 West	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$11,000,000
S-10	Parkway Boulevard (2700 South)	Widening: 2 to 4 lanes	Collector / 2.0 miles / Local	Needed Phase - 1	2015 - \$15,400,000
	7200 West to 5600 West	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$18,700,000
S-11	3300 South/ 3500 South	Operational	Principal Arterial / 5.2 miles / SR-171	Needed Phase - 1	2015 - \$13,000,000
	I-215 (West) to Highland Drive	ROW:2015 - 126 ft. / 2040 - 126 ft.	Bike Routes: None/Base/Priority	Funded Phase - 2	Phased - \$23,400,000
S-12	3500 South	Widening: 2 to 4 lanes	Principal Arterial / 2.2 miles / SR-171	Needed Phase - 3	2015 - \$20,900,000
	SR-111 Bypass to 7200 West	ROW:2015 - 66 ft. / 2040 - 100 ft.	Bike Routes: Base/Priority	Funded Phase - U	Phased - \$51,500,000
S-13	3500 South	Widening: 2 to 4 lanes	Principal Arterial / 1.8 miles / SR-171	Needed Phase - 2	2015 - \$17,100,000
	7200 West to Mountain View Corridor	ROW:2015 - 66 ft. / 2040 - 100 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$30,800,000
				1	



		1	1	I	1
S-171	9400 South	Widening: 2 to 4 lanes	Collector / 0.4 miles / Local	Needed Phase - 1	2015 - \$4,200,000
	Monroe Street to State Street	ROW:2015 - 76 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$5,200,000
S-172	9400 South	Operational	Minor Arterial / 1.5 miles / Local	Needed Phase - 1	2015 - \$3,800,000
	State Street to Ski Connection Road	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$4,600,000
S-173	Little Cottonwood Road	Operational	Principal Arterial / 1.6 miles / SR-209	Needed Phase - 1	2015 - \$4,000,000
	Eastdale Drive to Wasatch Boulevard	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$7,200,000
S-37	10200 South	Widening: 2 to 4 lanes	Collector / 1.6 miles / Local	Needed Phase - 2	2015 - \$14,700,000
	SR-111 to Mountain View Corridor	ROW:2015 - 82 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 3	Phased - \$36,200,000
S-38	South Jordan Parkway (11000 South)	New Construction: 0 to 4 lanes	Minor Arterial / 1.8 miles / Local	Needed Phase - 1	2015 - \$24,300,000
	SR-111 to Mountain View Corridor	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$43,800,000
S-39	South Jordan Parkway (11000 South)	New Construction: 0 to 4 lanes	Minor Arterial / 0.3 miles / Local	Needed Phase - 1	2015 - \$4,100,000
	Mountain View Corridor to 5600 West	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$4,900,000
S-40	10600 South / 10400 South	Widening: 4 to 6 lanes	Principal Arterial / 2.0 miles / SR-151	Needed Phase - 1	2015 - \$27,400,000
	Bangerter Highway to Redwood Road	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$49,300,000
S-199	10600 South / 10400 South	Widening: 4 to 6 lanes	Principal Arterial / 2.1 miles / SR-151	Needed Phase - 1	2015 - \$18,500,000
	Redwood Road to I-15	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$22,500,000
S-41	10600 South	Widening: 2 to 4 lanes	Minor Arterial / 0.5 miles / Local	Needed Phase - 2	2015 - \$3,900,000
	1700 East to Highland Drive	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Base	Funded Phase - 2	Phased - \$6,900,000
S-42	11800 South	Widening: 2 to 4 lanes	Minor Arterial / 1.9 miles / Local	Needed Phase - 2	2015 - \$17,900,000
	Bacchus Highway to 6000 West	ROW:2015 - 66 ft. / 2040 - 99 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$32,300,000
S-45	11400 South	Widening: 2 to 4 lanes	Minor Arterial / 1.1 miles / Local	Needed Phase - 3	2015 - \$9,600,000
	1300 East to Highland Drive	ROW:2015 - 80 ft. / 2040 - 99 ft.	Bike Routes: None/Priority	Funded Phase - 3	Phased - \$23,600,000
S-46	Herriman Parkway (12600 South)	New Construction: 0 to 2 lanes	Principal Arterial / 1.7 miles / Local	Needed Phase - 1	2015 - \$23,000,000
	7300 West to 6000 West	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: Base	Funded Phase - 1	Phased - \$27,900,000
	12600 South	Widening: 4 to 6 lanes	Principal Arterial / 1.1 miles / Local	Needed Phase - 1	2015 - \$1,400,000
S-47	Mountain View Corridor to Bangerter	ROW:2015 - 123 ft. / 2040 - 123 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$1,700,000
	Highway				
S-174	12600 South	Operational	Principal Arterial / 2.4 miles / SR-71	Needed Phase - 1	2015 - \$6,000,000
	Bangerter Highway to Redwood Road	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$10,800,000
S-48	12300 South / 12600 South	Widening: 4 to 6 lanes	Principal Arterial / 2.6 miles / SR-71	Needed Phase - 1	2015 - \$52,000,000
	Redwood Road to I-15	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$93,700,000
S-197	12300 South / 12600 South	Widening: 4 to 6 lanes	Principal Arterial / 1.0 miles / SR-71	Needed Phase - 1	2015 - \$7,700,000
	I-15 to 700 East	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$9,400,000
S-175	Herriman Main Street	Operational	Minor Arterial / 1.4 miles / Local	Needed Phase - 1	2015 - \$3,500,000
	7300 West to 6200 West	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$6,300,000
S-49	Riverton Boulevard	New Construction: 0 to 4 lanes	Collector / 0.9 miles / Local	Needed Phase - 1	2015 - \$11,200,000
	4570 West to 13400 South	ROW:2015 - 0 ft. / 2040 - 89 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$13,600,000
S-177	14600 South	Widening: 2 to 4 lanes	Minor Arterial / 1.0 miles / SR-140	Needed Phase - 3	2015 - \$9,500,000
	1000 West to Porter Rockwell Road	ROW:2015 - 76 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - U	Phased - \$23,400,000
S-54	Traverse Ridge Road	Widening: 2 to 4 lanes	Minor Arterial / 1.3 miles / Local	Needed Phase - 3	2015 - \$10,700,000
	Highland Drive to Mike Weir Drive	ROW:2015 - 89 ft. / 2040 - 99 ft.	Bike Routes: Base	Funded Phase - 3	Phased - \$26,400,000
	Porter Rockwell Road	New Construction/Widening: 0/2 to	Principal Arterial / 2.9 miles / Local	Needed Phase - 1	2015 - \$75,700,000
S-55	Mountain View Corridor to 14600 South	6 lanes	Bike Routes: Priority	Funded Phase - 1	Phased - \$92,100,000
	/ 1-15	ROW:2015 - 0 ft. / 2040 - 167 ft.			



SALT	LAKE COUNTY, NORTH-SOUTH FAC	CILITIES			
_	SR-111 Magna Bypass	New Construction: 0 to 4 lanes	Principal Arterial / 2.6 miles / SR-111	Needed Phase - 3	2015 - \$38,400,000
	SR-201 to SR-111	ROW:2015 - 0 ft. / 2040 - 113 ft.	Bike Routes: None/Priority	Funded Phase - U	Phased - \$94,600,000
	SR-111 / Bacchus Highway	Widening: 2 to 4 lanes	Principal Arterial / 7.4 miles / SR-111/	Needed Phase - 2	2015 - \$67,900,000
S-57	5400 South to South Jordan Parkway	ROW:2015 - 106 ft. / 2040 - 113 ft.	Local	Funded Phase - 2	Phased - \$122,200,000
	(11000 South)	·	Bike Routes: Priority		
	7300 West	New Construction: 0 to 2 lanes	Collector / 2.9 miles / Local	Needed Phase - 3	2015 - \$42,800,000
S-58	South Jordan Parkway (11000 South) to	ROW:2015 - 0 ft. / 2040 - 113 ft.	Bike Routes: None	Funded Phase - 3	Phased - \$105,500,000
	13100 South				
S-178	SR-111 / 8400 West	Widening: 2 to 3 lanes	Principal Arterial / 0.5 miles / SR-111	Needed Phase - 1	2015 - \$5,500,000
	SR-201 to 2700 South	ROW:2015 - 72 ft. / 2040 - 113 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$9,900,000
	Prosperity Road	New Construction: 0 to 4 lanes	Collector / 1.8 miles / Local	Needed Phase - 2	2015 - \$22,000,000
S-179	Crimson View Drive (10400 South) to	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$39,700,000
	11800 South				
S-180	6400 West	New Construction: 0 to 4 lanes	Collector / 1.6 miles / Local	Needed Phase - 1	2015 - \$19,600,000
	11800 South to Herriman Main Street	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None/Base	Funded Phase - 1	Phased - \$23,800,000
S-60	Mountain View Corridor	New Construction: 0 to 4 lanes	Principal Arterial / 3.2 miles / SR-85	Needed Phase - 2	2015 - \$660,000,000
	I-80 to SR-201	ROW:2015 - 0 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 3	Phased-\$1,626,700,000
S-61	Mountain View Corridor	New Construction: 0 to 4 lanes	Principal Arterial / 3.1 miles / SR-85	Needed Phase - 1	2015 - \$410,000,000
	SR-201 to 4100 South	ROW:2015 - 0 ft. / 2040 - 328 ft.	Bike Routes: None/Priority	Funded Phase - 1	Phased - \$498,800,000
S-64	Mountain View Corridor	New Construction: 0 to 4 lanes	Principal Arterial / 2.4 miles / SR-85	Needed Phase - 1	2015 - \$105,000,000
	Porter Rockwell Road to Utah County Line	ROW:2015 - 0 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$127,700,000
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 3.2 miles / SR-85	Needed Phase - 3	2015 - \$195,000,000
S-65	I-80 to SR-201	lanes	Bike Routes: None	Funded Phase - U	Phased - \$480,600,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 3.1 miles / SR-85	Needed Phase - 2	2015 - \$215,000,000
S-66	SR-201 to 4100 South	lanes	Bike Routes: None/Priority	Funded Phase - 2	Phased - \$387,200,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 2.2 miles / SR-85	Needed Phase - 2	2015 - \$70,000,000
S-67	4100 South to 5400 South	lanes	Bike Routes: Priority	Funded Phase - 2	Phased - \$126,100,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 4.7 miles / SR-85	Needed Phase - 2	2015 - \$193,300,000
S-68	5400 South to 9000 South	lanes	Bike Routes: Priority	Funded Phase - 2	Phased - \$348,000,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 1.6 miles / SR-85	Needed Phase - 2	2015 - \$65,800,000
S-69	9000 South to 10200 South	lanes	Bike Routes: Priority	Funded Phase - 3	Phased - \$162,200,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 8.9 miles / SR-85	Needed Phase - 2	2015 - \$366,000,000
S-70	10200 South to Porter Rockwell Road	lanes	Bike Routes: Priority	Funded Phase - 3	Phased - \$902,000,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
	Mountain View Corridor	Widening and Interchanges: 4 to 6	Freeway / 2.4 miles / SR-85	Needed Phase - 2	2015 - \$41,300,000
S-71	Porter Rockwell Road to Utah County Line	lanes	Bike Routes: None	Funded Phase - 2	Phased - \$74,400,000
		ROW:2015 - 328 ft. / 2040 - 328 ft.			
S-72	Mountain View Corridor	Widening: 6 to 6+HOT lanes	Freeway / 26 miles / SR-85	Needed Phase - 3	2015 - \$86,700,000
	SR-201 to Utah County Line	ROW:2015 - 328 ft. / 2040 - 328 ft.	Bike Routes: Priority	Funded Phase - U	Phased - \$213,600,000
S-73	5600 West	Widening: 2 to 4 lanes	Principal Arterial / 2.8 miles / SR-172	Needed Phase - 1	2015 - \$34,100,000
	I-80 to SR-201	ROW:2015 - 86 ft. / 2040 - 150 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$41,500,000
S-74	5600 West	Operational	Principal Arterial / 6.0 miles / SR-172	Needed Phase - 1	2015 - \$15,000,000
	SR-201 to 6200 South	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Base	Funded Phase - 2	Phased - \$27,000,000
S-76	5600 West	Operational	Minor Arterial / 3.1 miles / Local	Needed Phase - 1	2015 - \$7,800,000
	6200 South to New Bingham Highway	ROW:2015 - 100 ft. / 2040 - 100 ft.	Bike Routes: Base	Funded Phase - 2	Phased - \$14,000,000









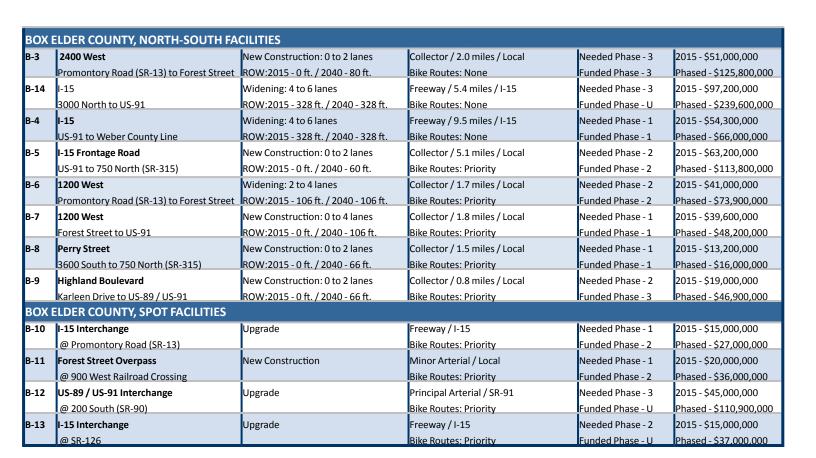




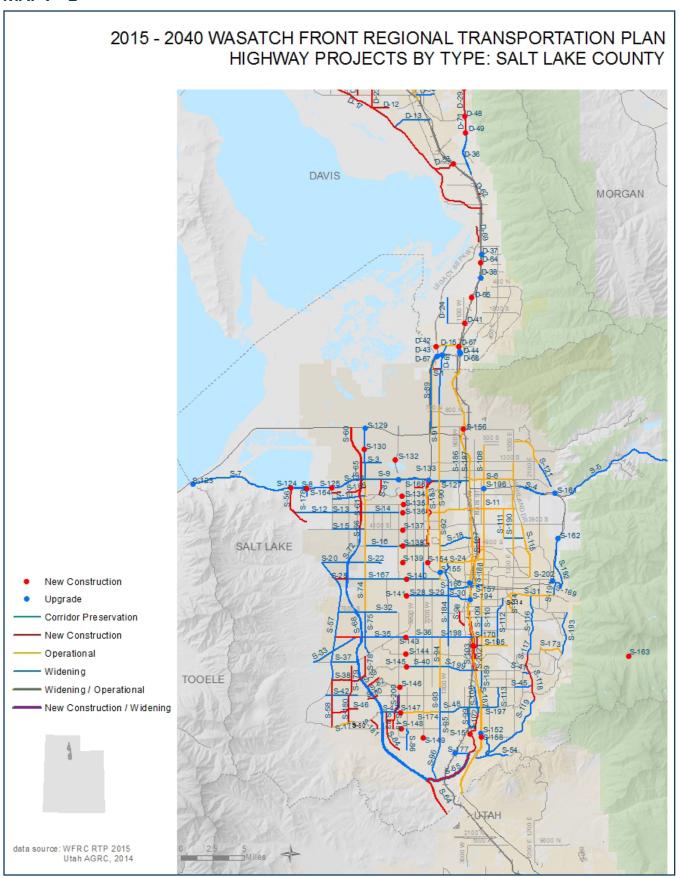
W-51	2550 South	Operational	Collector / 4.6 miles / Local	Needed Phase - 1	2015 - \$11,500,000
	4700 West to I-15	ROW:2015 - 89 ft. / 2040 - 89 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$14,000,000
W-52	3300 South	Operational	Collector / 3.4 miles / Local	Needed Phase - 1	2015 - \$8,500,000
	4700 West to Midland Drive	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$10,300,000
W-13	4000 South (SR-37)	Widening: 2 to 4 lanes	Minor Arterial / 2.8 miles / SR-37	Needed Phase - 1	2015 - \$25,100,000
	West Weber Corridor to Midland Drive	ROW:2015 - 86 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$30,500,000
W-53	4000 South (SR-37)	Operational	Minor Arterial / 1.2 miles / SR-37	Needed Phase - 1	2015 - \$3,000,000
	Midland Drive to 1900 West (SR-126)	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$3,600,000
W-12	Country Hills Drive	Widening: 2 to 4 lanes	Minor Arterial / 0.6 miles / Local	Needed Phase - 1	2015 - \$5,700,000
	Adams Avenue to Gramercy Avenue	ROW:2015 - 66 ft. / 2040 - 99 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$6,900,000
W-15	4400 South	Operational	Collector / 1.6 miles / Local	Needed Phase - 1	2015 - \$4,000,000
	1900 West (SR-126) to 700 West	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$4,900,000
W-17	5600 South / 5500 South	Widening: 2 to 4 lanes	Principal Arterial / 2.1 miles / SR-97	Needed Phase - 2	2015 - \$18,400,000
	West Weber Corridor to 3500 West	ROW:2015 - 66 ft. / 2040 - 86 ft.	Bike Routes: Base/Priority	Funded Phase - 2	Phased - \$33,100,000
	5600 South	Widening: 2 to 4 lanes	Principal Arterial / 2.0 miles / SR-97	Needed Phase - 2	2015 - \$37,500,000
	3500 West to 1900 West (SR-126)	ROW:2015 - 66 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$67,600,000
	5600 South	Widening: 5 to 6 lanes	Principal Arterial / 0.2 miles / SR-97	Needed Phase - 1	2015 - \$1,500,000
	1900 West (SR-126) to I-15	ROW:2015 - 106 ft. / 2040 - 106 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$1,900,000
W-55	Falcon Hill Road Connector	New Construction: 0 to 2 lanes	Collector / 2.4 miles / Local	Needed Phase - 3	2015 - \$29,400,000
	I-15 to 1150 West	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None	Funded Phase - 3	Phased - \$72,400,000
	R COUNTY, NORTH-SOUTH FACILI	·	ibike Rodees. None	ii dilaca i ilase 3	# 11d3cd \$72,100,000
_	West Weber Corridor	Corridor Preservation	Freeway / 14.8 miles / SR-67	Needed Phase - 1	2015 - \$51,600,000
	I-15 (North) to 4000 South	ROW:2015 - 0 ft. / 2040 - 220 ft.	Bike Routes: Base	Funded Phase - 1	Phased - \$62,700,000
W-20	West Weber Corridor	Corridor Preservation	Freeway / 2.7 miles / SR-67	Needed Phase - 1	2015 - \$9,400,000
	4000 South to Davis County Line	ROW:2015 - 0 ft. / 2040 - 220 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$11,400,000
	West Weber Corridor	New Construction: 0 to 4 lanes	Freeway / 1.8 miles / SR-67	Needed Phase - 2	2015 - \$13,900,000
	4000 South to 5500 South	ROW:2015 - 0 ft. / 2040 - 220 ft.	Bike Routes: Priority	Funded Phase - U	Phased - \$34,200,000
W-22	West Weber Corridor	New Construction: 0 to 4 lanes	Freeway / 1.0 miles / SR-67	Needed Phase - 2	2015 - \$16,600,000
	5500 South to Davis County Line	ROW:2015 - 0 ft. / 2040 - 220 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$29,900,000
W-24	4700 West	New Construction: 0 to 2 lanes	Collector / 0.3 miles / Local	Needed Phase - 1	2015 - \$4,100,000
	4600 South to 4800 South	ROW:2015 - 0 ft. / 2040 - 110 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$4,900,000
W-66	4700 West	Operational	Collector / 0.9 miles / Local	Needed Phase - 1	2015 - \$23,000,00
	4800 South to 5500 South	ROW:2015 - 66 ft. / 2040 - 66 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$2,700,000
	3500 West	Operational	Collector / 4.6 miles / Local	Needed Phase - 1	2015 - \$11,500,000
	1200 South to Midland Drive	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$20,700,000
W-56	Midland Drive (SR-108)	New Construction: 0 to 4 lanes	Minor Arterial / 1.4 miles / SR-108	Needed Phase - 1	2015 - \$17,100,000
	I-15 to 1900 West (SR-126)	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$20,800,000
	Midland Drive (SR-108)	Widening: 2 to 4 lanes	Principal Arterial / 0.9 miles / SR-108	Needed Phase - 2	2015 - \$23,700,000
	1900 West (SR-126) to Hinkley Drive	ROW:2015 - 66 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$42,700,000
	(SR-79)	10.11.2010 00.11.7 20.10 110.11.	Jime Housess Trome,		γ . <u>2</u> ,, σσ,σσσ
W-26	3500 West / Midland Drive (SR-108)	Widening: 2 to 4 lanes	Principal Arterial / 2.5 miles / SR-108	Needed Phase - 1	2015 - \$65,900,000
	4275 South to Davis County Line	ROW:2015 - 66 ft. / 2040 - 110 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$80,200,000
	1900 West / 2000 West (SR-126)	Widening: 2 to 4 lanes	Principal Arterial / 4.3 miles / SR-126	Needed Phase - 2	2015 - \$56,900,000
	2700 North to 1200 South	ROW:2015 - 66 ft. / 2040 - 150 ft.	Bike Routes: Priority	Funded Phase - U	Phased - \$140,300,000
	1900 West (SR-126)	Widening: 4 to 6 lanes	Principal Arterial / 0.4 miles / SR-126	Needed Phase - 1	2015 - \$4,600,000
	Riverdale Road to 5600 South	ROW:2015 - 100 ft. / 2040 - 150 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$5,600,000
	I-15	Widening: 4 to 6 lanes	Freeway / 2.4 miles / I-15	Needed Phase - 1	2015 - \$13,700,000
	Box Elder County Line to 2700 North	ROW:2015 - 328 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$16,700,000
W-30	I-15	Widening: 6 to 6+HOT lanes	Freeway / 2.9 miles / I-15	Needed Phase - 1	2015 - \$50,400,000
	I-84 to Davis County Line	ROW:2015 - 328 ft. / 2040 - 328 ft.	Bike Routes: None	Funded Phase - 1	Phased - \$61,400,000
W-57	1200 West	Operational	Collector / 0.5 miles / Local	Needed Phase - 1	2015 - \$1,300,000
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W-58	1200 West	New Construction: 0 to 2 lanes	Collector / 0.6 miles / Local	Needed Phase - 2	2015 - \$7,300,000
	17th Street to 21st Street	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None	Funded Phase - 2	Phased - \$13,200,000
W-59	150 East	New Construction: 0 to 2 lanes	Collector / 2.5 miles / Local	Needed Phase - 2	2015 - \$25,000,000
	2700 North to Larsen Lane	ROW:2015 - 0 ft. / 2040 - 70 ft.	Bike Routes: None	Funded Phase - 3	Phased - \$61,600,000
W-60	400 / 450 East	New Construction: 0 to 2 lanes	Collector / 0.4 miles / Local	Needed Phase - 1	2015 - \$4,000,000
	Skyline Drive to 3700 North	ROW:2015 - 0 ft. / 2040 - 70 ft.	Bike Routes: Base	Funded Phase - 1	Phased - \$4,900,000
W-33	400 / 450 East	Widening: 2 to 4 lanes	Collector / 0.8 miles / Local	Needed Phase - 1	2015 - \$7,000,000
	3300 North to 2600 North	ROW:2015 - 68 ft. / 2040 - 89 ft.	Bike Routes: Base	Funded Phase - 1	Phased - \$8,600,000
W-61	Washington Boulevard	Operational	Principal Arterial / 3.1 miles / SR-89	Needed Phase - 1	2015 - \$7,800,000
	12th Street to Riverdale Road	ROW:2015 - 150 ft. / 2040 - 150 ft.	Bike Routes: None/Base/Priority	Funded Phase - 2	Phased - \$14,000,000
W-34	Monroe Boulevard	New Construction: 0/2 to 4 lanes	Minor Arterial / 2.4 miles / Local	Needed Phase - 2	2015 - \$29,400,000
	3100 North to 1300 North	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: None/Base	Funded Phase - 2	Phased - \$52,900,000
W-35	Harrison Boulevard / Mountain Road	Operational	Collector / 4.7 miles / Local	Needed Phase - 1	2015 - \$11,800,000
	2600 North to 12th Street	ROW:2015 - 86 ft. / 2040 - 86 ft.	Bike Routes: Priority	Funded Phase - 1	Phased - \$14,300,000
W-36	Harrison Boulevard	Operational	Principal Arterial / 3.9 miles / SR-203	Needed Phase - 1	2015 - \$9,800,000
	12th Street to Country Hills Drive	ROW:2015 - 110 ft. / 2040 - 110 ft.	Bike Routes: None/Base/Priority	Funded Phase - 1	Phased - \$11,900,000
W-37	Harrison Boulevard	Widening: 4 to 6 lanes	Principal Arterial / 2.3 miles / SR-203	Needed Phase - 2	2015 - \$23,200,000
	Country Hills Drive to US-89	ROW:2015 - 99 ft. / 2040 - 123 ft.	Bike Routes: Base/Priority	Funded Phase - 2	Phased - \$41,700,000
W-38	US-89	Widening: 4 to 6 lanes	Freeway / 1.7 miles / US-89	Needed Phase - 2	2015 - \$33,300,000
	Harrison Boulevard to I-84	ROW:2015 - 120 ft. / 2040 - 150 ft.	Bike Routes: Priority	Funded Phase - 2	Phased - \$60,000,000
	Skyline Drive	New Construction: 0 to 2 lanes	Collector / 0.5 miles / Local	Needed Phase - 1	2015 - \$6,400,000
W-39	1. Quail Run Drive to 4600 South	ROW:2015 - 0 ft. / 2040 - 86 ft.	Bike Routes: Base/Priority	Funded Phase – 1	Phased - \$7,700,000
	2. Ogden City Limits to Megan Circle	· ·			
	R COUNTY, SPOT FACILITIES				
W-62	I-15 Interchange	Upgrade	Freeway / I-15	Needed Phase - 2	2015 - \$15,000,000
	@ 2700 North		Bike Routes: Priority	Funded Phase - 3	Phased - \$37,000,000
W-63	I-15 Interchange	Upgrade	Freeway / I-15	Needed Phase - 3	2015 - \$15,000,000
	@ Pioneer Road		Bike Routes: Priority	Funded Phase - U	Phased - \$37,000,000
W-64	400 North	New Construction	Collector / Local	Needed Phase - 1	2015 - \$20,000,000
	@ 530 West Railroad Crossing		Bike Routes: Base	Funded Phase - 2	Phased - \$36,000,000
W-41	I-15 Interchange	Upgrade	Freeway / I-15	Needed Phase - 1	2015 - \$45,000,000
	@ 24th Street		Bike Routes: Priority	Funded Phase - 1	Phased - \$54,700,000
W-65	4000 South	New Construction	Minor Arterial / Local	Needed Phase - 1	2015 - \$20,000,000
	@ 2500 West Railroad Crossing		Bike Routes: Priority	Funded Phase - 2	Phased - \$36,000,000
W-43	I-15 Interchange	Upgrade	Freeway / I-15	Needed Phase - 1	2015 - \$15,000,000
	@ 5600 South	1,0	Bike Routes: Base	Funded Phase - 2	Phased - \$27,000,000
W-44	US-89 Interchange	Upgrade	Freeway / US-89	Needed Phase - 3	2015 - \$107,000,000
	@ I-84		Bike Routes: Priority	Funded Phase - U	Phased - \$263,700,000
ВОХЕ	LDER COUNTY, EAST-WEST FACILIT	TIES			
	Wilson Lane (1500 North)	New Construction: 0 to 2 lanes	Minor Arterial / 1.0 miles / Local	Needed Phase - 1	2015 - \$12,200,000
	Promontory Road (SR-13)/Watery Lane to		Bike Routes: None	Funded Phase - 1	Phased - \$14,900,000
	950 West	2010 0010			
	1200 South	New Construction: 0 to 2 lanes	Collector / 0.5 miles / Local	Needed Phase - 3	2015 - \$4,400,000
	Commerce Way to US-89	ROW:2015 - 0 ft. / 2040 - 66 ft.	Bike Routes: None	Funded Phase - 3	Phased - \$10,800,000
	Commerce way to 03-89	INO VV . ZUIS - U IL. / ZU4U - 00 IL.	IDINE NUULES. NUITE	ii ullueu rildse - 3	1110260 - 210,800,000



2015 - 2040 WASATCH FRONT REGIONAL TRANSPORTATION PLAN HIGHWAY PROJECTS BY TYPE: DAVIS, WEBER AND BOX ELDER COUNTIES CACHE BOX ELDER WEBER New Construction Upgrade Corridor Preservation New Construction MORGAN Operational - Widening Widening / Operational DAVIS New Construction / Widening data source: WFRC RTP 2015 SALTLAKE Utah AGRC, 2014



MAP 7 - 3 2015 - 2040 WASATCH FRONT REGIONAL TRANSPORTATION PLAN HIGHWAY PROJECTS BY PHASE: DAVIS, WEBER AND BOX ELDER COUNTIES CACHE BOX ELDER WEBER Phase 1: 2015 - 2024

- Phase 2: 2025 2034



data source: WFRC RTP 2015 Utah AGRC, 2014

Back to Table of Contents ∧

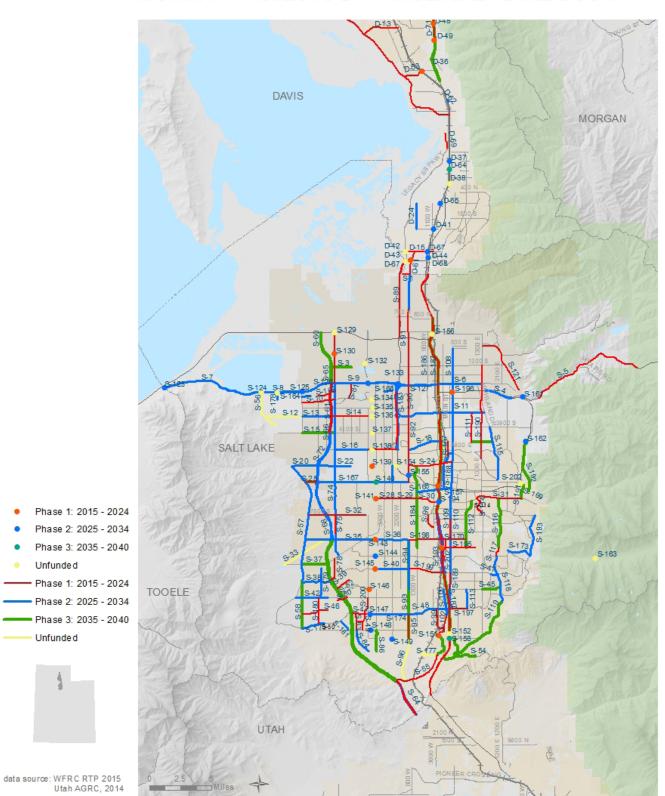
MORGAN

TOOELE

SALT LAKE

DAVIS

2015 - 2040 WASATCH FRONT REGIONAL TRANSPORTATION PLAN HIGHWAY PROJECTS BY PHASE: SALT LAKE COUNTY



2015 - 2040 WASATCH FRONT REGIONAL TRANSPORTATION PLAN **FUTURE RIGHT-OF-WAY** Bear River City Honeyville Wellsville Paradise CACHE BOX ELDER WEBER MORGAN DAVIS Future Right of Way* - ROW = 220' - 328' - ROW = 126' - 167' ROW = 100' - 125' ROW = 80' - 99' ROW = 66' - 79' Streets Counties * May vary due to local ordinances SALTLAKE TOOELE Grantsville WASATCH Highland Sources: Utah AGRC, WFRC

2015 - 2040 WASATCH FRONT REGIONAL TRANSPORTATION PLAN FUTURE FUNCTIONAL CLASSIFICATION CACHE BOX ELDER WEBE it Heights MORGAN DAVIS Future Classification* - Principal Arterial Minor Arterial Collector Freeway Streets SUMMIT Counties * May vary due to local ordinances TOOELE Grantsville WASATCH UTAH Data Source: UDOT, WFRC